REPORT RESUMES

ED 016 819 VT 003 523

VOCATIONAL EDUCATION IN COLORADO, LEGISLATIVE COUNCIL REPORT TO THE COLORADO GENERAL ASSEMBLY.
COLORADO STATE GENERAL ASSEMBLY, DENVER
REPORT NUMBER RES-PUB-118 PUB DATE NOV 66
EDRS PRICE MF-$0.50 HC-$4.64 114P.

DESCRIPTORS- *PROGRAM EVALUATION, *VOCATIONAL EDUCATION, *HIGH SCHOOLS, *POST SECONDARY EDUCATION, APPRENTICESHIPS, *FEDERAL PROGRAMS, STATE SURVEYS, EDUCATIONAL FINANCE, STUDENT ENROLLMENT, CURRICULUM, JUNIOR COLLEGES, COLORADO,

THE COUNCIL'S COMMITTEE ON VOCATIONAL EDUCATION, CREATED IN 1965 TO STUDY THE COLORADO LAWS PERTAINING TO VOCATIONAL EDUCATION AND YOUTH EMPLOYMENT, REVIEWED PUBLICLY SUPPORTED VOCATIONAL EDUCATION PROGRAMS, THE STATE BOARD FOR VOCATIONAL EDUCATION, AND LOCAL AND FEDERAL NONSCHOOL PROGRAMS TO DEVELOP AN INVENTORY OF VOCATIONAL EDUCATION IN COLORADO. NO SINGLE AGENCY HAD BEEN IN A POSITION TO DEVELOP OVERALL VOCATIONAL EDUCATION POLICY AFFECTING ALL PROGRAMS. THERE WAS A LACK OF ADEQUATE OCCUPATIONAL EDUCATION OPPORTUNITY ESPECIALLY IN THE PUBLIC SCHOOLS AND POST-SECONDARY INSTITUTIONS. THE GUIDANCE COUNSELORS IN PUBLIC SCHOOLS FREQUENTLY LACKED THE NECESSARY OCCUPATIONAL ORIENTATION. THE SECONDARY SCHOOLS WERE WELL SUITED FOR OFFERING BASIC EXPLORATORY AND INTRODUCTORY OCCUPATIONAL EDUCATION, BUT FELT THE TERMINAL-TYPE OCCUPATIONAL PROGRAMS SHOULD BE LARGELY POST-SECONDARY IN NATURE. THE RECOMMENDATIONS FOR LEGISLATIVE ACTION INCLUDED (1) INCREASED STATE SUPPORT FOR SECONDARY SCHOOL OCCUPATIONAL PROGRAMS, (2) STATE SUPPORT FOR OCCUPATIONAL GUIDANCE AND COUNSELING IN THE SECONDARY SCHOOLS, (3) INCREASED EMPHASIS ON POST-SECONDARY OCCUPATIONAL PROGRAMS, PARTICULARLY IN THE JUNIOR COLLEGES, (4) THE EXPANSION OF THE APPRENTICESHIP PROGRAM, AND (5) THE ESTABLISHMENT OF A NEW BOARD CONTROLLING BOTH JUNIOR COLLEGE AND OCCUPATIONAL EDUCATION PROGRAM. (HC)

ED016819

Report to the Colorado General Assembly:

VOCATIONAL EDUCATION IN COLORADO

1876

COLORADO LEGISLATIVE COUNCIL

RESEARCH PUBLICATION NO. 118

NOVEMBER, 1966

VT003523

LEGISLATIVE COUNCIL

OF THE

COLORADO GENERAL ASSEMBLY

Senators

Floyd Oliver, Chairman
Fay DeBerard
Vincent Massari
L. T. Skiffington
Ruth Stockton
Robert L. Knous,
Lt. Governor

Representatives

C. P. (Doc) Lamb, Vice Chairman
Forrest Burns
Allen Dines, Speaker
Richard Gebhardt
Harrie Hart
Mark Hogan
John R. P. Wheeler

* * * * * * * * *

The Legislative Council, which is composed of five Senators, six Representatives, and the presiding officers of the two houses, serves as a continuing research agency for the legislature through the maintenance of a trained staff. Between sessions, research activities are concentrated on the study of relatively broad problems formally proposed by legislators, and the publication and distribution of factual reports to aid in their solution.

During the sessions, the emphasis is on supplying legislators, on individual request, with personal memoranda, providing them with information needed to handle their own legislative problems. Reports and memoranda both give pertinent data in the form of facts, figures, arguments, and alternatives.

VOCATIONAL EDUCATION IN COLORADO

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Legislative Council

Report To The

Colorado General Assembly

Research Publication No. 118
November, 1966

OFFICERS
Sen. Floyd Oliver
Chairman
Rep. C.P. (Doc) Lamb
Vice Chairman

STAFF
Lyle C. Kyle
Director
Phillip E. Jones
Senior Analyst
David F. Morrissey
Senior Analyst
Janet Wilson
Research Associate
Roger M. Weber
Research Assistant

COLORADO GENERAL ASSEMBLY

1876

LEGISLATIVE COUNCIL

ROOM 341, STATE CAPITOL
DENVER, COLORADO 80203
222-9911 - EXTENSION 2285

MEMBERS
Lt. Gov. Robert L. Knous
Sen. Fay DeBerard
Sen. William O. Lennox
Sen. Vincent Massari
Sen. Ruth S. Stockton

Speaker Allen Dines
Rep. Forrest G. Burns
Rep. Richard G. Gebhardt
Rep. Harrie E. Hart
Rep. Mark A. Hogan
Rep. John R. P. Wheeler

November 29, 1966

To Members of the Forty-sixth General Assembly:

In accordance with the provisions of House Joint Resolution No. 1024, 1965 regular session, the Legislative Council submits the accompanying report relating to vocational education in Colorado.

The committee appointed by the Legislative Council to conduct the study reported its findings and recommendations to the Council on November 28. At that time the report was adopted by the Legislative Council for transmission to the Forty-sixth General Assembly.

Respectfully submitted,

/s/ Senator Floyd Oliver
Chairman

FO/mp

COLORADO GENERAL ASSEMBLY

LEGISLATIVE COUNCIL

ROOM 341, STATE CAPITOL
DENVER, COLORADO 80203
222-9911 - EXTENSION 2285

OFFICERS
Sen. Floyd Oliver
Chairman
Rep. C.P. (Doc) Lamb
Vice Chairman

STAFF
Lyle C. Kyle
Director
Phillip E. Jones
Senior Analyst
David F. Morrissey
Senior Analyst
Janet Wilson
Research Associate
Roger M. Weber
Research Assistant

MEMBERS
Lt. Gov. Robert L. Knous
Sen. Fay DeBerard
Sen. William O. Lennox
Sen. Vincent Massari
Sen. Ruth S. Stockton

Speaker Allen Dines
Rep. Forrest G. Burns
Rep. Richard G. Gebhardt
Rep. Harrie E. Hart
Rep. Mark A. Hogan
Rep. John R. P. Wheeler

November 29, 1966

Senator Floyd Oliver, Chairman
Colorado Legislative Council
Room 341, State Capitol
Denver, Colorado

Dear Mr. Chairman:

Your committee appointed to study vocational education in Colorado has completed its assignment and submits herewith its final report and recommendations.

The recommendations include: increased state support for secondary school occupational programs; state support for guidance and counseling in the secondary schools; increased emphasis on post secondary occupational programs, particularly in the junior colleges; changes in the junior college system; establishment of a new board for junior colleges and occupational education; and expansion of the apprenticeship program.

Respectfully submitted,

/s/ Representative Richard G. Gebhardt
Chairman, Committee on Vocational
Education

RGG/mp

FOREWORD

The Legislative Council's Committee on Vocational Education was created under the provisions of House Joint Resolution No. 1024, 1965 regular session, to study the Colorado laws pertaining to vocational education and youth employment. Committee members included:

Rep. Richard G. Gebhardt, Chairman
Sen. Roy R. Romer, Vice Chairman
Sen. Edwin S. Lamm
Sen. Vincent Massari
Rep. Jean K. Bain
Rep. Don Brinton
Rep. Charles J. DeMoulin
Rep. Floyd K. Haskell
Rep. Wayne N. Knox
Rep. Darrell J. Skelton
Rep. Betty Kirk West
Rep. John R. P. Wheeler
Rep. Jerry L. Yost

(Senator Lamm resigned from the General Assembly in the summer of 1966 and was not replaced on the committee.)

The committee and staff were assisted in this study by numerous state, local, and federal officials. Special thanks go to Dr. M. G. Linson, Executive Director of the State Board for Vocational Education; Dr. Harold Anderson, formerly on the staff of the State Board for Vocational Education; Dr. Frank C. Abbott, Executive Director of the Commission on Higher Education; and Dr. Byron W. Hansford, Commissioner of Education. Miss Clair Sippel, secretary of the Legislative Reference Office, and Miss Janet Wilson, senior research analyst from the Legislative Council's staff, also assisted the committee.

November, 1966

Lyle C. Kyle
Director

TABLE OF CONTENTS

Page

LETTERS OF TRANSMITTAL . . . iii

FOREWORD . . . vii

LIST OF TABLES . . . x

COMMITTEE FINDINGS AND CONCLUSIONS . . . xi

RECOMMENDATIONS FOR LEGISLATIVE ACTION . . . xiv

VOCATIONAL EDUCATION IN COLORADO . . . 1

- Introduction. . . . 1
  - Definition of Vocational Education . . . 1
  - Matching Training With Jobs. . . . 1
  - Need For Legislative Direction . . . 1
  - Inventory of Vocational Education Programs . . . 2
  - Research Coordinating Unit, Colorado State University. 3
  - Advisory Council, State Board for Vocational Education. . . . 3
  - Commission on Higher Education . . . 3
  - Summary of Committee Meetings. . . . 3
  - Problems and Issues in Vocational Education. . . . 3
- State Board For Vocational Education. . . . 4
  - Statutory Provisions . . . 4
  - Occupational Categories and Educational Levels of Programs. . . . 5
  - Enrollments in Vocational Education Programs . . . 7
  - Locations of Programs. . . . 8
  - The Colorado State Plan. . . . 8
  - Relation to the Federal Government . . . 17
  - Financial Information for 1964-65. . . . 18
- Vocational Course Offerings and Enrollments in the Secondary Schools . . . 27
- Area Vocational Education Schools . . . 39
- Vocational Education in the Junior Colleges . . . 43
- Metropolitan State College. . . . 47
- Emily Griffith Opportunity School . . . 54
- Apprenticeship Programs . . . 58
- Metropolitan Youth Education Center . . . 66
- Manpower Development and Training Act . . . 68
- Economic Opportunity Act. . . . 71
- Summary of Committee Meetings . . . 78
  - Mr. Herrick Roth, Colorado Labor Council . . . 78
  - Mr. Basil Allen, Boulder Valley Schools. . . . 79
  - Mr. Lawrence Meier, Jefferson County Schools . . . 79
  - Mr. Russell Britton, Denver Public Schools . . . 80
  - President Victor Hopper, Dean Leland Benz, and Dean Leonard Smith, Southern Colorado State College . . . 82
  - Mr. Fred Betz and Mr. Al Bunger, State Board For Vocational Education . . . 83

Page

Mr. Shelby Harper, Commission on Higher Education. . . 83
Dr. Fred Bremer and Dr. Leland Luchsinger, Division of Education Beyond the High School, State Department of Education. 84
Dr. M. G. Linson, State Board For Vocational Education. 86
Mr. Xen Hosler, State Board For Vocational Education . 87
Preliminary Report From Advisory Council 89
Letter From State Board For Vocational Education . . . 90
Letter From State Board of Education 91
Letter From Commission on Higher Education 92
Dr. Byron Hansford, State Commissioner of Education. . 92
Problems and Issues in Vocational Education 94
Secondary Level. 94
Post-Secondary Level 96
Administration at the State Level. 99

LIST OF TABLES

Table Page

1. Approximate Number of Reimbursable Vocational Education Programs, 1966-67. 7
2. Anticipated Enrollments in Reimbursable Vocational Education Programs, 1966-67. 9
3. Anticipated Number and Location of Vocational Education Programs by County, 1966-67. 10
4. Estimate of Total Expenditures For Vocational Education Purposes Under All Vocational Education Acts, 1966-67. . 19
5. Expenditure of Federal, State, and Local Funds For Vocational Education, By Act, Level, and Program, 1964-65. 21
6. Vocational Education Expenditures For State Administration And Reimbursement To Local Schools, By Program, 1964-65. 22
7. Financing of Vocational Agriculture Programs, 1964-65. . . 23
8. Financing of Distributive Education Programs, 1964-65. . . 23
9. Financing of Vocational Homemaking Programs, 1964-65 . . . 24
10. Financing of Health Programs, 1964-65. 24
11. Financing of Office Occupations Programs, 1964-65. 25
12. Financing of Technical Education Programs, 1964-65 25
13. Financing of Trades And Industries Programs, 1964-65 . . . 26
14. Course Offerings And Fall Enrollments in Vocational And Vocationally Related Areas, 1964-65. 29
15. Percentage Comparison of Enrollments (Head Count) Academic And Vocational Courses; Fall 1965 45
16. Enrollment (Head Count) Academic And Vocational Courses; Fall 1965 46
17. Opportunity School Registrations, 1965-66. 57
18. Apprentices Registered With the Colorado Apprenticeship Council As Of December 31, 1965 64

VOCATIONAL EDUCATION IN COLORADO

Committee Findings and Conclusions

1. There is a lack of adequate occupational education opportunity for the young people of Colorado. Few students at the secondary and post secondary levels are receiving the kind of training they need to make them employable and prepare them for immediate entry into productive employment. It is clear that a better program of occupational education is needed in this state. The term "occupational education" is used instead of "vocational education" because "vocational" in its narrowest sense is identified with specific federally-defined philosophies, programs, and standards. "Occupational," on the other hand, has a broader connotation and is not tied to outmoded concepts of needs and programs.

2. Special recognition should be given to one of the most successful types of occupational education observed by this committee over two years, the apprenticeship program. It is hard to improve upon the concept of apprenticeship as a means of training for employment. The system of on-job-training of several years' duration, accompanied by supplementary education in related subjects, is ideally suited to the development of skilled craftsmen and should be encouraged and expanded. Those concerned with other forms of occupational education can learn much from the methods used in apprenticeship programs.

3. The federally-sponsored employment training and retraining programs under the Manpower Development and Training Act and the Economic Opportunity Act also deserve special attention. These programs have shown that new methods and new approaches can be used effectively to fill many of the existing occupational training gaps where the schools have failed to meet the need. The state and its subdivisions would do well to utilize the knowledge and experience gained from these federal programs. If initial occupational education for all persons were more effective, federal "patchwork" programs would not be needed.

4. The greatest need for improvement in occupational education is in the public schools and post secondary institutions. Establishment of a better program of occupational training will require the combined efforts of local school districts, junior colleges, four-year colleges and universities, and the appropriate state agencies.

5. Guidance counselors in the public schools frequently lack the occupational orientation needed to help students plan toward vocations requiring less than a college degree. The schools should have more counselors who are knowledgeable about job opportunities and job requirements and who can help students set realistic occupational goals.

6. The secondary schools are well suited to offering basic exploratory and introductory courses in occupational education. Although many local junior and senior high schools are now offering exploratory or introductory courses in vocationally related subjects, too often these courses are not taught with occupational objectives in mind. Handled properly, they should be directed toward helping the student decide on an occupational direction or preparing him for entry into a post secondary occupational program. If organized to carry out such occupational objectives, there is no reason why such courses should not be eligible for reimbursement, notwithstanding their exploratory or introductory nature.

7. Most occupational education of a terminal nature belongs at the post secondary level; however, some terminal-type programs are needed in the high schools. Local high schools should offer those terminal occupational programs which are appropriate to students of high school age and should receive reimbursement to help provide the proper facilities and staff for such programs.

8. Public school vocational education has not been reaching many of the students who need it most, namely those who will enter the job market at or before high school graduation without further training. Priority in high school occupational programs should be given to potential dropouts and students who will not be continuing their education.

9. It should be recognized that future job requirements may necessitate increasing the compulsory school attendance age from 16 to 18 in a few years. Colorado's schools can begin preparing for this possibility now by developing the kinds of occupational education programs that are best suited to the needs of students between the ages of 16 and 18. Better occupational offerings for these students will help keep them in school longer voluntarily.

10. Public school vocational and occupational education in Colorado is not receiving enough emphasis in terms of state aid. While the state provides about $80 million or more a year for distribution as general aid for schools, it provides less than half a million dollars for distribution to local schools as vocational education aid. Yet exploratory, introductory, and terminal occupational education courses are of the utmost importance to at least half of the students enrolled in high school. Since the schools have not been providing adequate occupational education under the general aid concept, more emphasis on earmarked funds may be necessary. It seems that the best way to encourage expanded occupational programs would be to increase state participation in the local costs of these programs.

11. Some vocational programs are too costly for individual high schools to provide. Therefore there is a need for facilities other than those in the individual high schools to offer certain types of vocational opportunities.

12. Terminal-type occupational programs should be largely post secondary in nature and should be given immediate recognition and action. The junior college is a logical institution to which we should turn for expanded and improved post secondary occupational offerings, since by definition a substantial part of its program should be in this area. The junior college program should be flexible enough to serve the needs of students who have not graduated from high school as well as those who enter with high school diplomas.

13. Occupational education, particularly at the technical level, should be expanded in other post secondary educational institutions as well. Four-year colleges and universities should offer occupational education where appropriate to meet student needs. Southern Colorado State College, for example, is successfully serving trade-technical needs in conjunction with its academic program and should be urged to continue and expand the program. Metropolitan State College also appears to be moving in this direction. Other state colleges and universities should likewise evaluate the extent to which they too can be providing the occupational programs needed in their respective parts of the state and in the state as a whole without disrupting the academic portions of their programs.

14. Although local school districts, boards of cooperative services, and junior colleges can all provide some measure of post secondary occupational education and should be encouraged to expand their efforts, these efforts may not be able to meet all the occupational education needs of the state. Thus it may be necessary for the state to supplement the locally initiated programs with programs financed, directed, or operated by the state to assure the availability in strategic locations of high quality occupational training in even the more costly fields.

15. The administrative structure for vocational education at the state level is bound to have an effect on the program. The lack of communication between the State Board of Education and the State Board for Vocational Education and their staffs cannot be tolerated. As long as the State Board for Vocational Education remains a separate entity, cooperation and coordination must be established. Friendly and effective working relationships are essential to the smooth and efficient operation of the vocational education program as part of the total educational structure.

16. In order to ensure the availability of high quality occupational education programs in the junior colleges, and in order to provide for the establishment of new junior colleges in appropriate locations, the state should assume responsibility for the junior college system. With state funding and state direction, the junior colleges will be better equipped to serve occupational training needs around the state.

17. A system of state junior colleges should provide for state control as well as state financing. It should bring junior colleges into the higher education structure and separate them from the public school structure where local control is of paramount importance. Thus the junior college function should be removed from

the State Board of Education and placed in a separate board of control which would fit into the higher education structure and would be more directly responsible to the Commission on Higher Education.

18. The change in junior college structure should be closely coordinated with a shift in vocational education emphasis from the secondary to the post secondary level. To accomplish these two goals together, serious consideration should be given to the feasibility of establishing a single board to undertake both the junior college and occupational education functions. Such a board would be in charge of the state system of junior colleges and would also replace the State Board for Vocational Education as the agency to administer state and federal vocational education funds and programs. The membership of the board should include persons representing the interests of occupational education, including vocational, technical, apprenticeship, and other types of occupational training. Establishment of a board for junior colleges and occupational education would emphasize the need for additional post secondary vocational and technical programs of a terminal nature and would constitute a mandate to the junior colleges to provide such programs. Contractual arrangements could be made with the State Board of Education for the administration of reimbursement to secondary level occupational programs with the advice and assistance of the Advisory Council on Vocational Education which was created in 1965.

19. The above changes in junior college and vocational education structure are suggested because the state has failed to provide adequate occupational education under the present structure. It is felt that the changes indicated will result in substantial improvements, but the committee recognizes that there can be no absolute assurances that the new agencies will carry out the occupational education function in the manner described. Thus the General Assembly must give close and continuing attention to developments in occupational education under the new structure. Both the new board for junior colleges and occupational education and the State Board of Education should be watched carefully to be certain that occupational education is not shoved aside in favor of general academic education in the secondary schools and junior colleges.

20. Even with the structural and other changes suggested here, we may find that Colorado's occupational education programs still are not serving the needs of all those who could benefit from them. If the secondary schools and junior colleges cannot fill all the occupational training needs of the state, the General Assembly should look again at the concept of the area vocational school as a means of supplementing the programs of multi-purpose institutions.

Recommendations for Legislative Action

1. The committee recommends that the state encourage schools to provide good guidance programs by offering a substantial proportion of state aid to school districts to help pay the salaries of counseling and guidance personnel, with a directive that such personnel comply with specific guidelines emphasizing informed occupational counseling for all students. The committee further recommends that

the state provide funds for the employment of a number of occupational guidance field men to work with guidance and counseling personnel in local school districts. In view of the fact that nearly half of the students will not be going on to college, counselors should be urged not to over-emphasize their counseling toward four-year college degrees.

2. The committee recommends that the state provide a substantial proportion of state aid to school districts to help pay the costs of exploratory and introductory occupational courses at the junior high and high school levels. Included among the courses eligible for state aid should be a guidance-oriented course offered as early as the eighth or ninth grade which could give the student an overview of the wide range of occupational choices available to him, attempting to develop healthy attitudes toward the work world and encouraging each student to relate learning experiences to occupational goals. This and other exploratory or introductory courses having definite occupational goals should be eligible for state aid even if federal requirements prohibit federal reimbursement.

3. The committee recommends that the state provide a substantial proportion of state aid to help pay the costs of occupational programs of a terminal nature. The committee further recommends that the state direct those in charge of the occupational education function to re-evaluate the present system of reimbursement for terminal-type occupational programs at the secondary level to determine how the funds can be used most efficiently. Some of what is now claimed to be "vocational" is not in fact preparing persons for entry into gainful employment. Increased state aid should be directed toward those programs which are truly meeting occupational training objectives in fields where employment demands exist.

4. The committee recommends that the state assume responsibility for the junior college system, removing the junior college function from the State Board of Education and placing it under a separate board of control which would become a part of the system of higher education.

5. The committee recommends that the State Board for Vocational Education be abolished and that the occupational education function be combined in a single board, the board to have full control of all occupational education programs and all junior college programs. Details of this plan should be worked out by the Commission on Higher Education following legislative guidelines from the standing education committees of the House and Senate. The plan should be developed in cooperation with the State Board of Education, the State Board for Vocational Education, the Apprenticeship Council, the State Department of Rehabilitation, and other appropriate agencies. The committee further recommends that occupational education at the secondary level be given special recognition by

contracting with the State Board of Education for the supervision of secondary programs with the advice and assistance of the Advisory Council on Vocational Education which was created in 1965.

6. The committee recommends that the board of cooperative services law be amended to require that approval be obtained from the new board for junior colleges and occupational education prior to the establishment of any post secondary occupational program involving more than one school district.

7. The committee recommends that the law creating the new board for junior colleges and occupational education require the membership to include persons representing the interests of occupational education.

8. The committee recommends an expansion of the program of the Colorado Apprenticeship Council and adequate state funding to achieve this end, and further recommends that state help, including reimbursement for classroom space and teachers' salaries, etc., be made available for accredited programs registered with the Apprenticeship Council. The committee further recommends that any state program embracing occupational education should respect the jurisdiction of the apprenticeable occupations served through the Apprenticeship Council and that any state agency engaged in occupational training should avail itself of the experience and opportunity that accredited labor-management jointly financed and administered programs provide.

VOCATIONAL EDUCATION IN COLORADO

Introduction

Definition of Vocational Education

Vocational education is defined as training and retraining designed to fit individuals for gainful employment in occupations generally considered to require less than a baccalaureate degree. Emphasis is placed on programs for young people who have not yet entered the labor market, but vocational education also includes extensive programs for adults who need training or retraining to achieve stability or advancement in employment.

Vocational education may be provided under either public or private sponsorship. It can be offered in public or private schools or in a work environment through on-job-training and apprenticeship programs. Publicly sponsored programs may be federal, state, or local; they frequently represent a combined effort of all three levels of government.

Matching Training With Jobs

Vocational education can be viewed from the standpoint of either the student or the employer. The student looks to vocational education to give him the skills that will make him employable and enable him to compete in the job market. The employer looks to vocational education to maintain an adequate and well-trained labor supply from which he can find qualified persons to fill his job vacancies.

In the interests of the student, the employer, and the economy generally, vocational educators must make every attempt to match training with jobs. Students should be trained for the kinds of jobs that are likely to be available for them when they enter the labor force. Vocational education must try to avoid training persons for jobs that no longer exist and must do all it can to prevent situations in which other jobs remain unfilled because no one has been trained to fill them. When vocational education succeeds in the task of matching training with jobs, it is contributing to the development of a healthy and dynamic economy and is a wise and solid investment in the future.

Need For Legislative Direction

Few would deny the need for programs to prepare individuals for gainful employment. Nearly everyone would agree that vocational education is of vital importance and should be encouraged at a time when jobs are becoming increasingly complex. But agreement on the importance of vocational education is not an adequate basis for policy making. There are differences of opinion regarding the best types of programs, the most appropriate levels, the most desirable institutional structure, and the most satisfactory means of financing the vocational education we need. These are ultimately policy decisions for the General Assembly. The Committee on Vocational Education has attempted to provide background information to assist the General Assembly in the establishment of a legislatively determined pattern and direction for vocational education in Colorado.

Inventory of Vocational Education Programs

The committee reviewed several different types of publicly supported vocational programs in an attempt to develop a kind of inventory of vocational education in Colorado. So many different levels of education are involved, with so many different agencies providing support and direction, that it has been extremely difficult for anyone to achieve a comprehensive overview. The committee found that there is no agency which has been in a position to develop over-all vocational education policy affecting all programs. No agency has had the authority to coordinate all vocational education efforts. Consequently no single agency has kept track of all the various vocational education programs in existence in this state.

The committee first reviewed the work of the State Board for Vocational Education, which is directed by statute to administer the traditional federally supported vocational education programs in the schools. Next the committee looked at the extent of the vocational course offerings in the junior and senior high schools. New developments toward construction of area vocational education schools were examined. Junior college vocational and technical programs were reviewed. The patterns of vocational and technical education at Metropolitan State College and Opportunity School in Denver were considered in evaluating the present programs and needs in the Denver metropolitan area.

Non-school programs were also reviewed. Foremost among these were the apprenticeship programs sponsored through the Colorado Apprenticeship Council. Also of interest to the committee was the Metropolitan Youth Education Center, a special type of institution designed to serve the needs of dropouts in the Denver-Jefferson County area.

Finally, the committee reviewed the federal non-school programs designed to provide vocational training for the poor and the unemployed -- the Manpower Training and Development Act and the Economic Opportunity Act. These programs were initiated to fill gaps in vocational training where the states have not been able to meet all the training needs.

The inventory of programs indicates the diversity and lack of coordination which faces the General Assembly in the field of vocational education.

Research Coordinating Unit, Colorado State University

The state of Colorado has been fortunate in having a vocational education research unit in operation at Colorado State University in Fort Collins. The committee has relied on the Research Coordinating Unit for some of the information it might otherwise have attempted to gather independently. Publications of the Research Coordinating Unit include two extensive follow-up studies on 1963 high school graduates, a report drawing together existing sources of occupational information for the Denver area, and a survey of occupations in the Colorado electronics industry.

Advisory Council, State Board for Vocational Education

The committee has been extremely interested in the work of the newly created advisory council to the State Board for Vocational Education. The preliminary report of the council was made to the committee in August. The staff of the State Board has attempted to provide liaison between the advisory council and the committee. The committee is pleased to see the advisory council taking an active part in vocational education policy making.

Commission on Higher Education

The committee has awaited the recommendations of the Commission on Higher Education concerning junior colleges so that the over-all vocational education structure could be evaluated in the light of the Commission's recommendations. The committee has appreciated the interest the Commission has shown in vocational education problems and has enjoyed the Commission's cooperation.

Summary of Committee Meetings

Because many of the comments made in committee hearings have not been covered adequately in the inventory of vocational education programs or in other portions of the report, a summary of testimony is included for the reader's convenience.

Problems and Issues in Vocational Education

In an attempt to bring together the various aspects of the committee's study and identify the problem areas and possible legislative direction, the final section of the report contains a brief discussion of the major vocational education problems and issues facing the General Assembly.

State Board for Vocational Education

Statutory Provisions

Colorado's vocational education program is under the supervision of the State Board for Vocational Education, a seven-member board which is appointed by the governor. The board was originally established in 1917, primarily for the purpose of receiving and administering federal grants for vocational education -- initially in agriculture, trades and industries, and home economics.

The statutory provisions relating to the State Board for Vocational Education now appear in article 1 of chapter 146, C.R.S. 1963, as amended by chapter 315, Session Laws of 1965. The 1965 amendment, among other things, added two members to the board to make a total of seven members.

The membership is required by statute to include one practicing agricultural producer, one representative of homemaking, one representative from the field of distribution, one representative of business and office practices, one representative of trades and industries, one representative of labor organizations, and one representative of employer organizations. Members are appointed for six-year terms.

The statute directs the state board to prepare plans for vocational education as required by the acts of congress and to implement the plans, when they have been federally approved, by appropriate contract with any school district, publicly supported educational institution, or other approved educational agency.

The statute further directs the state board to prepare and implement plans for the training of teachers of vocational and technical subjects, to establish minimum qualifications necessary for recognition of such teachers, and to provide for the issuance of credentials to teachers meeting those minimum qualifications.

Under the statute, procedures established as a result of any state law relating to vocational education must be approved by the state board before such procedures can become effective. The state board is directed to develop and publish informational and technical data pertaining to vocational education.

The state board appoints the director of vocational education and establishes job qualifications for other professional employees. The director is directly responsible to the board and the other professional employees are accountable to the director.

A new provision for a vocational education advisory council was enacted as part of the 1965 law. Because the advisory council and its work have been of particular interest during this study, the statute on this subject is quoted below:

146-1-9. Advisory council. (1) (a) The state board for vocational education shall appoint a state advisory council whose functions shall be as follows:

(b) To act in a general advisory capacity to the board on all matters within its jurisdiction.

(c) To review and report its findings to the board, who in turn shall report annually to the governor and the general assembly, on the vocational needs of the state of Colorado within the public schools, within the colleges and universities, within nonschool projects, within private profit and nonprofit trade and vocational schools, within the institutional vocational education areas related to on-the-job training, and within programs stimulated by public laws of the federal government, such as the Manpower Development and Training Act of 1962 and the Economic Opportunity Act of 1964.

(d) To report to the board who in turn shall report annually to the governor and the general assembly on a recommended framework for state and community action aimed at matching employment potential and vocational training. Such report shall be made after thorough consultation and review with the Colorado department of employment; the governor's manpower advisory committee; the industrial commission of Colorado; the division of commerce and development; the federal regional offices of the departments of labor, commerce, and health, education and welfare; the area redevelopment administration; the small business administration; and employer, trade, manufacturing, business, agricultural, and labor organizations.

(e) To serve without compensation, but to be reimbursed for all necessary expenses incurred in the performance of their respective duties.

Although the advisory council was not activated in time to report prior to the 1966 legislative session, a substantial report is expected in November or December, 1966, prior to the convening of the General Assembly in 1967. A preliminary report was presented to the Committee on Vocational Education in August.

Occupational Categories and Educational Levels of Programs

The State Board for Vocational Education distributes federal aid moneys for the following types of vocational education programs:

Agriculture (both on-farm and off-farm)
Homemaking (both regular and wage-earning)
Trades and Industries
Distributive Education
Office Education
Health Occupations
Technical Education

Agricultural education, one of the oldest vocational education programs, has traditionally been education for success and improvement in the business of farming. More recently it has been expanded to include education for a number of off-farm but agriculturally-related occupations.

Home economics education is generally viewed as education for the vocation of homemaking, but it is now being expanded to give more emphasis to preparation for gainful employment in occupations related to the various homemaking skills.

Trade and industrial education provides training for skilled or semi-skilled crafts or occupations which involve the functions of designing, producing, processing, assembling, maintaining, servicing, or repairing.

Distributive education involves education for occupations related to distribution and marketing. When it was established, the in-school distributive education program was limited to cooperative work-study programs but it now includes a pre-entry training program as well.

Business and office education trains students for occupations which are related to office activities, including data processing and clerical, stenographic, and secretarial occupations. Although it has been extensively offered in the schools for many years, office education was not included as a federally reimbursable vocational program until the passage of the Vocational Education Act of 1963.

Vocational education programs for health occupations include training for practical nurses, dental technicians and assistants, occupational therapy aides, medical assistants, and hospital aides and attendants. Most of the health occupation programs are at the post secondary and adult levels.

Technical education programs are for the training of technicians in electronic, mechanical, electrical, chemical, aeronautical, production, instrumentation, civil, data processing, and computer programming occupations. They are offered almost exclusively at the post secondary and adult levels.

In most occupational categories the training offered extends to all educational levels and age groups. The board works with secondary, post secondary, and adult programs. In addition there is a limited number of programs designed for "students with special needs" --those who are unable to benefit from the regular vocational courses.

Information from the staff of the State Board for Vocational Education concerning the programs anticipated for 1966-67 indicates that Colorado will have about 600 reimbursable programs altogether. Each "program" represents a course or group of courses in a single attendance center for which the instructors' salaries are partially reimbursed. The expected programs are shown in Table 1 according to occupational category and educational level.

Table 1

Approximate Number of Reimbursable Vocational Education Programs, 1966-67

					Total	
	Secondary	Post Secondary	Adult	Spcl. Needs	No. of Programs	Per Cent
Agriculture	65	4	50	1	120	20%
Distributive Education	48	4	30	-	82	14
Health Occupations	-	9	8	-	17	3
Home Economics						
Regular	149	6	24	-	179	30
Wage-earning	3	1	13	2	19	3
Office Occupations	63	11	14	5	93	16
Technical	-	10	10	-	20	3
Trades and Industries	34	8	19	4	65	11
Total	362	53	168	12	595	100%
Per Cent	61%	9%	28%	2%	100%	

Sixty-one per cent of the reimbursable programs are at the secondary level; only nine per cent are post-secondary. The number of reimbursable home economics programs exceeds the number in any other category. Agriculture is second in number of programs, with office occupations ranking third.

Enrollments in Vocational Education Programs

According to projections prepared by the staff of the State Board for Vocational Education, the enrollments in vocational education programs for 1966-67 will total approximately 81,000, with about 61,000 of these expected to complete the programs by the end of the year. The distribution of these projected enrollments and completions among the occupational categories and educational levels is shown in Table 2.

Enrollments per program are higher at the adult level than at the secondary level. About 58 per cent of the anticipated total enrollment is adult, but the adult level comprises only 28 per cent of the programs. Only 30 per cent of the enrollment will be secondary, yet 61 per cent of the programs are at the secondary level. Eleven per cent of the enrollment and nine per cent of the programs will be post-secondary.

Of the secondary school vocational enrollment, 45 per cent will be in home economics (most will be in the regular program which is not to prepare students for gainful employment); 31 per cent in business and office occupations; 11 per cent in agriculture; and 6 per cent each in distributive education and trades and industries.

Of the total enrollment at all levels, 35 per cent will be in home economics, 20 per cent in business and office occupations, 19 per cent in trades and industries, 16 per cent in distributive education, and only five per cent in agriculture, even though 20 per cent of the programs are in agriculture.

In home economics, trades and industries, and distributive education the majority of enrollees are in adult programs. In business and office occupations, 46 per cent of the enrollees are at the secondary level, 28 per cent are post-secondary, and 24 per cent are adult. In agriculture, 70 per cent of the enrollees are in high school.

Locations of Programs

A review of the locations of vocational education programs in the various occupational categories and educational levels for 1966-67 shows that many parts of the state are without an adequate number of programs. In many locations, vocational education opportunities are not available for the large numbers of young people and adults who need them. The problem is of greater magnitude in the heavily populated urban areas, although it may be more obvious in the more sparsely populated rural regions.

Table 3 shows the anticipated number and location of vocational education programs by county for 1966-67.

The Colorado State Plan

The program of the State Board for Vocational Education is operated in accordance with the board's policy document, the Colorado State Plan for Vocational Education. This document sets forth in detail the principles to be followed in approving and reimbursing vocational education programs in Colorado. The availability of federal funds is contingent on federal approval of such a plan. Although the federal regulations from the Office of Education set some of the basic ground rules, most of the policies contained in the State Plan are matters for State Board determination. In keeping with the changing needs of the state, the State Plan is constantly subject to review and revision by the State Board.

Table 2

Anticipated Enrollments in Reimbursable Vocational Education Programs, 1966-67

	Agric.	Bus. & Office	Distrib. Educ.	Health	Home Econ.		Tech.	Trades and Ind.	Total
					Reg.	Wage			
Secondary									
Enrollment	2,800	7,625	1,425		10,600	450		1,585	24,485
Completion*	525	6,000	900		1,450	450		700	10,025
Post-secondary									
Enrollment	200	4,720	215	400	20	100	1,800	1,700	9,155
Completion*	180	2,000	215	400	20	100	500	900	4,315
Adult									
Enrollment	950	4,000	10,900	1,000	15,500	1,900	825	11,925	47,000
Completion*	950	4,000	10,900	1,000	15,500	1,900	800	11,750	46,800
Special Needs									
Enrollment	10	280	150	-	-	-	-	-	990
Completion*	5	280	150	-	-	-	-	-	735
TOTAL									
Enrollment	3,960	16,625	12,690	1,400	26,120	2,450	2,625	15,760	81,630
Completion*	1,660	12,280	12,165	1,400	16,970	2,450	1,300	13,650	61,875

*Many vocational programs are for two or more years.

Table 3

ANTICIPATED NUMBER AND LOCATION OF VOCATIONAL EDUCATION PROGRAMS, BY COUNTY, 1966-67*

	Occupational Categories and Purposes Served							
				Home Economics				
Name of County	Agr.	D. E.	H.Occ.	Regular	Wage	Of.Ed.	Tech.	T&I
Adams	S-2 A-2	S-5 A-2	--- ---	S-17 A-2	A-1 ---	S-4 A-1	--- ---	S-5 A-2
Alamosa	---	---	---	S-1	---	---	---	S-1 A-1
Arapahoe	S-1 ---	S-3 A-2	--- ---	S-8 A-3	S-1 A-2	A-1 PS-1	--- ---	S-1 A-1
Archuleta	---	---	---	S-1	---	---	---	---
Baca	S-2 A-2	---	---	---	---	---	---	---
Bent	S-2 A-2	S-1 A-1	---	S-2	---	S-1	---	---
Boulder	S-1 A-1	S-2 A-2	PS-1 A-2	S-2 A-2	S-1 A-1	S-2 A-2	A-1 ---	S-2 A-2
Chaffee	---	---	---	S-1	---	---	---	PS-1
Cheyenne	---	---	---	S-2	---	---	---	---
Clear Creek	---	S-1 A-1	---	S-1	---	---	---	---
Conejos	A-1	---	---	S-2 A-1	---	S-1	---	S-1
Costilla	---	---	---	S-2	---	---	---	---

Name of County	Occupational Categories and Purposes Served							
				Home Economics				
	Agr.	D. E.	H.Occ.	Regular	Wage	Of.Ed.	Tech.	T&I
Crowley	S-1	---	---	S-1	---	S-1	---	---
Custer	---	---	---	S-1	---	---	---	---
Delta	S-1	S-1	---	S-1 A-1	---	S-4	---	---
Denver	A-1	A-5 S-9 PS-2	PS-2 A-1	A-1	A-1 X-2	PS-2 A-1 X-3	PS-2 A-1	S-1 PS-2 A-1 X-1
Dolores	S-1	---	---	---	---	S-1	---	S-1
Douglas	---	---	---	---	---	---	---	---
Eagle	S-1 A-1	---	---	S-2	---	---	---	---
Elbert	---	---	---	S-1	---	---	---	---
El Paso	X-1	S-3 A-1	A-1	S-3 A-1	A-1	X-1 S-5 A-1	---	X-3 S-2 A-1
Fremont	PS-1	A-1	---	S-4 A-4	---	X-1 S-3 A-1	---	A-1 S-3 PS-1
Garfield	S-1 A-1	A-1	---	S-2	---	S-1	---	---
Gilpin	---	---	---	---	---	---	---	---
Grand	---	---	---	---	---	---	---	---
Gunnison	S-1 A-1	---	---	S-1	---	S-1	---	S-1
Hinsdale	---	---	---	---	---	---	---	---
Huerfano	---	---	---	---	---	S-1	---	S-1

Name of County	Occupational Categories and Purposes Served							
				Home Economics				
	Agr.	D.E.	H.Occ.	Regular	Wage	Of.Ed.	Tech.	T&I
Jackson	---	---	---	S-1 A-1	---	---	---	---
Jefferson	A-1	S-3 A-3	---	S-18 A-1	---	S-9 A-1	A-1	S-1 A-1
Kiowa	---	---	---	---	---	---	---	---
Kit Carson	S-2 A-2	---	---	S-3	---	---	---	---
Lake	---	A-1	---	S-1	---	---	---	S-1
La Plata	S-1	S-1 A-1	PS-1	S-2	A-1	S-1	---	S-2
Larimer	S-2 A-1	S-3 A-2	PS-1 A-1	S-5 A-2	S-1 A-1	A-1 S-3 PS-1	PS-1	S-1 A-1
Las Animas	A-1 S-1	---	PS-1	S-4 PS-2	---	PS-1 A-1	PS-1 A-1	A-1 S-1 PS-1
Lincoln	---	---	---	S-2	---	---	---	---
Logan	S-5 PS-1 A-5	---	PS-1 A-1	S-4 PS-1	---	S-1 PS-1 A-1	PS-1 A-1	PS-1 A-1
Mesa	S-2 A-1	S-2 PS-1	PS-1 A-1	S-8 PS-1	PS-1	S-3 PS-1	PS-1 A-1	S-4 A-2
Mineral	---	---	---	S-1 A-1	---	---	---	---
Moffat	S-1 A-1	S-1 A-1	---	---	---	---	---	S-1
Montezuma	S-2 A-1	---	---	S-1	A-1	S-3	---	---
Montrose	S-2 A-1	S-1 A-1	---	S-2	A-1	S-2	---	S-1
Morgan	S-4 A-3	S-1 A-1	---	S-4	---	---	---	---

Name of County	Occupational Categories and Purposes Served							
				Home Economics				
	Agr.	D. E.	H.Occ.	Regular	Wage	Of.Ed.	Tech	T&I
Otero	S-2 A-2	S-1 A-1	---	S-5 PS-1	---	S-2 PS-1	PS-1 A-1	A-1
Ouray	---	---	---	---	---	---	---	---
Park	S-1 A-1	---	---	---	---	---	---	---
Phillips	S-2 A-2	---	---	S-2	---	---	---	---
Pitkin	---	---	---	---	---	---	---	---
Prowers	S-4 A-2	S-1	---	S-3	---	PS-1 A-1	PS-1 A-1	PS-1 A-1
Pueblo	S-1 A-1	S-5 PS-1	PS-1 A-1	S-1 PS-1	A-2	S-5 PS-1 A-1	PS-1 A-1	PS-1 S-3 A-1
Rio Blanco	S-1 A-1	---	---	S-2	---	S-1 PS-1	PS-1 A-1	---
Rio Grande	S-1	---	---	S-3	---	S-1	---	---
Routt	S-2 A-2	---	---	S-2	---	S-1	---	---
Saguache	---	---	---	S-1	---	---	---	---
San Juan	---	---	---	S-1	---	---	---	---
San Miguel	---	---	---	---	---	---	---	---
Sedgwick	S-1 A-1	S-1 A-1	---	S-1	---	---	---	---
Summit	---	---	---	S-1	---	---	---	---
Teller	---	---	---	---	---	---	---	---
Washington	S-4 A-3	---	---	S-4	---	---	---	---

Name of County	Occupational Categories and Purposes Served							
	Agr.	D. E.	H. Occ.	Home Economics Regular	Home Economics Wage	Of.Ed.	Tech.	T&I
Weld	S-7 A-4	S-2 A-1	---	S-8 A-2	A-1	S-6 A-1	---	S-1 A-2
Yuma	S-3 A-2	S-1 A-1	---	S-4 A-1	A-1	---	---	---

*CODE: S - Secondary
PS - Post-Secondary
A - Adult
X - Persons with Special Needs

The Colorado State Plan (Continued)

Federal funds are available under the Vocational Education Act of 1963 and under the Smith Hughes and George Barden Acts. If the State Board chose to do so it could transfer the Smith Hughes and George Barden funds over into the Vocational Education Act of 1963 in order to increase the flexibility and ease of administration. The Smith Hughes and George Barden Acts carry more rigid standards and are not as far-reaching or as flexible as the 1963 law.

According to both the federal law and the Colorado State Plan, the federal funds under the Vocational Educational Act of 1963 may be allotted for the following purposes:

a. Vocational education for persons attending high school.

b. Vocational education for persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market.

c. Vocational education for persons who have already entered the labor market and who need training or retraining to achieve stability or advancement in employment.

d. Vocational education for persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program.

e. Construction of area vocational education school facilities.

f. Teacher training and supervision, program evaluation, special demonstration and experimental programs, development of instructional materials, state administration and leadership, and other ancillary services and activities to assure quality in all vocational education programs.

At least one third of the state's allotment must be used only for (1) post secondary programs or (2) construction of area school facilities or (3) both.

In allotting funds among the various purposes, the State Board must satisfy itself that:

a. All persons in all communities of the state have ready access to vocational education.

b. Vocational education offered is of high quality.

c. Vocational education is suited to the needs, abilities and interests of the students.

d. Training is fulfilling the current and projected manpower needs and job opportunities.

Under the State Plan, funds are to be allocated to local educational agencies on a matching basis. Funds may be expended directly by the State Board for program development when the board determines that it is necessary.

The State Plan describes the occupational categories and educational levels to be served. It also sets up the duties and qualifications (education and experience) for state and local vocational education personnel, with specific requirements for teachers in each occupational category and each educational level. Requirements for the training of vocational teachers are also included.

According to the Colorado State Plan, vocational instruction is to be designed "to fit individuals for employment in a recognized occupation." It can be pre-employment or in connection with employment. All students in pre-employment classes must have an occupational objective which is a matter of record. The objective may be either a specific recognized occupation or a cluster of closely related occupations in an occupational field. Instruction in vocational courses must be related to the occupation for which the student is being trained. It can include classroom instruction and field, shop, laboratory, cooperative work, or other occupational experience. Reimbursement is not provided for courses in general education subjects or for preparation of individuals for employment in occupations requiring a baccalaureate degree.

In establishing, continuing, or terminating a program of vocational instruction, consideration is to be given to the interests, needs, and abilities of all persons in the community or area who have need for, desire, and can benefit from the instruction. Also to be considered is the need and opportunity in the employment market for the occupational skills and knowledge for which instruction is being provided.

Individuals are to be selected for enrollment in vocational classes on the basis of their potential for achieving competence in the occupation for which instruction is given.

The program of instruction is to be based on a consideration of the skills and knowledge required in the occupation and is to include a planned, logical sequence of those essentials of education or experience deemed necessary for the individual to meet his occupational objective. Programs of instruction are to include up-to-date knowledge and skills and should be developed and conducted in consultation with potential employers and other individuals having skills in and substantive knowledge of the occupation. They are to be sufficiently extensive in duration and intensive within a scheduled unit of time to enable the student to develop competencies necessary to fit him for employment in the occupation or occupational field for which he is being trained.

On the subject of vocational guidance and counseling the State Plan declares that vocational education will include vocational guidance and counseling personnel and services sufficient to enable the program of instruction to meet and continue to meet the standards and requirements of the State Plan. The state board is to maintain an adequate staff to:

1. Develop, secure and distribute occupational information;

2. Provide consultative services concerning the vocational aspects of guidance;

3. Give leadership to the promotion and supervision of vocational guidance and counseling services at the local level.

Local programs of vocational guidance and counseling, though not reimbursable as separate programs, are to provide vocational guidance and counseling personnel and service adequate to:

1. Identify and encourage the enrollment of individuals needing vocational education;
2. Provide individual students with information necessary for realistic vocational planning;
3. Assist students in carrying out their vocational plans;
4. Aid students in vocational placement;
5. Conduct follow-up procedures to determine the effectiveness of the vocational instruction and guidance and counseling programs.

The State Plan establishes procedures for taking action on area vocational education school facility projects. Under the Plan, local educational agencies desiring approval of area school projects must submit a written project proposal to the state board for approval. The state board will establish a priority for funding. The state board may also initiate construction of area vocational schools under its own sponsorship. The State Plan also lists in detail the terms and conditions of approved projects.

Work-study programs are also covered by the State Plan. These are not the cooperative work experience programs conducted as part of the vocational education curriculum. They involve jobs at the school or in some other public agency for students who (1) are in vocational education programs; (2) are in need of the earnings from employment to commence or continue the vocational education program; and (3) are at least 15 years of age and less than 21 and capable of maintaining good standing in school while employed. No student can be employed more than 15 hours per week or for more than $45 per month or $350 per academic year.

Specific requirements under the Smith Hughes and George Barden Acts are included in the State Plan, although, as was noted above, it would be possible to transfer the moneys under these acts to the Vocational Education Act of 1963 so that the entire amount could be spent without the detailed restrictions.

Relation to the Federal Government

Vocational education as a separate and distinct program with separate financing has developed throughout the nation as a result of action by the federal government, beginning with the Smith Hughes Act of 1917. Up to that time the schools had not been providing the kind of occupational instruction that would prepare students for the common occupations which employed most of the workers. To encourage the development of the needed vocational education programs in the schools of the nation, Congress voted to provide incentive aid for programs training persons in agriculture, trades and industries, and homemaking. Colorado's State Board for Vocational Education was established in 1917 for the purpose of administering Colorado's share of federal aid for these purposes.

The federal government is still the prime mover in vocational education. Today, under the Vocational Education Act of 1963, federal aid is higher than ever before and it applies to several other fields of vocational education in addition to agriculture, trades and industries, and homemaking.

The Colorado State Board for Vocational Education is still primarily an agency for the distribution of federal aid. The board and its staff appear to be moving away from this, however. One of the purposes of the 1965 amendment to the vocational education law was to enable and encourage the board to broaden its outlook and establish state level policies for vocational education which would be less dependent on federal regulations and guidelines and more directly related to the specific needs and goals of the state of Colorado.

The philosophy of the 1963 federal act supports the development of creative leadership at the state level. The act permits much greater flexibility than was previously possible in the use of federal aid funds. In fact, if there is a tendency to continue in the traditional ways of the past, the reason lies more in resistance to change by state and local policy makers than in any statutory prohibitions imposed by the federal government.

The operations of the state board are financed from both federal and state sources but the federal contribution is approximately three times as much as the state contribution. Federal funds for Colorado total about $2.4 million while state funds are approximately $800,000. Local matching moneys for vocational education amount to about $2.9 million.

Table 4 shows the estimated total expenditures for vocational education for 1966-67, as projected by the staff of the State Board for Vocational Education.

Financial Information for 1964-65

In addition to reviewing the estimates for 1966-67, the committee has been interested in the actual vocational education expenditure figures for the most recent year available. The figures were taken from the annual report of the State Board for Vocational Education.

Table 4

Estimate of Total Expenditures For Vocational Education Purposes Under All Vocational Education Acts, 1966-67

Program Purposes	Total	Federal Funds		State & Local Funds	
		Smith Hughes & George Barden	1963 Act	State	Local
Secondary	$2,085,029	$137,170	$ 544,629	$263,528	$1,139,702
Post-Secondary	1,636,063	196,429	365,635	180,720	893,279
Adult	501,370	47,842	119,585	55,324	278,619
Persons With Special Needs	258,090	---	79,979	37,000	141,111
Const. of Area Vocational Schools	1,000,000	---	500,000	---	500,000
Ancillary Services	862,916	119,758	344,568	159,436	239,154
Total	$6,343,468	$501,199	$1,954,396	$696,008	$3,191,865
Work Study	$ 466,666	$ ---	$ 350,000	$116,666	$ ---

Table 5 shows that for the fiscal year 1964-65, slightly over $4.5 million was spent for vocational education programs under the jurisdiction of the State Board for Vocational Education. Of this amount, about $1.4 million was provided by the federal government; $2.7 million was supplied from local sources; and approximately $400,000 was appropriated by the state.

Approximately $2.1 million is distributed under the Vocational Education Act of 1963 and about $2.1 million under the George Barden Act. Nearly half of the George Barden funds went for homemaking programs, most of which were at the secondary level. More than half of the non-construction funds under the 1963 act were also at the secondary level.

Table 6 shows the breakdown of expenditures by program. Homemaking receives the largest proportion of funds, with trades and industries receiving the next largest proportion.

Tables 7 through 13 show the expenditures for each program in detail.

Table 5

Expenditure of Federal, State, and Local Funds for Vocational Education, By Act, Level, and Program, 1964-65

	Federal	State and Local State	Local	Subtotal	Grand Total
Vocational Education Act of 1963					
Secondary	$ 377,370	$ 71,978	$ 439,680	$ 511,658	$ 889,028
Post Secondary	178,973	16,299	210,964	227,263	406,236
Adult	20,261	6,666	28,872	35,539	55,801
Persons With Special Needs	17,499	10,375	28,955	39,331	56,830
Construction	304,928	6,071	311,000	317,071	622,000
Ancillary Services	35,554	2,564	77,282	79,847	115,401
Work Study	---	---	---	---	---
Total	$ 934,587	$113,955	$1,096,755	$1,210,711	$2,145,298
Smith Hughes Act					
Agriculture	$ 25,594	$ ---	$ 25,594	$ 25,594	$ 51,188
Home Economics, Part-time	6,230	---	6,230	6,230	12,460
Home Economics, Other Than Part-time	---	---	---	---	---
Home Economics, Gainful Employment Only	---	---	---	---	---
Trades & Industries	24,920	630	111,760	112,390	137,310
Maint. of Teacher Training:					
Agriculture	3,166	---	3,166	3,166	6,332
Home Economics	4,167	---	4,167	4,167	8,334
Trades & Industries	2,667	---	2,667	2,667	5,334
Total	$ 66,744	$ 630	$ 153,584	$ 154,214	$ 220,958
George Barden Act					
Title I:					
Agriculture	$ 89,720	$ 21,268	$ 200,924	$ 222,193	$ 311,913
Distribution	24,136	36,879	104,937	141,817	165,953
Homemaking	66,636	159,358	776,462	935,821	1,002,457
Home Economics (Gainful Empl. Only)	---	---	---	---	---
Trades & Industries	77,699	48,380	125,948	174,328	252,027
Fisheries	---	---	---	---	---
Title II, Health (Pract. Nurse)	44,810	7,956	71,675	79,632	124,442
Title III, Technical	137,711	28,894	167,151	196,045	333,757
Total	$ 440,712	$302,738	$1,447,099	$1,749,838	$2,190,551
GRAND TOTAL, ALL ACTS	$1,442,044	$417,324	$2,697,440	$3,114,764	$4,556,808

Table 6

VOCATIONAL EDUCATION EXPENDITURES FOR STATE ADMINISTRATION AND REIMBURSEMENT TO LOCAL SCHOOLS. BY PROGRAM. 1964-65

Program	State Board	Local Boards of Education	Other Expenditures	Total Expenditures	Program As Per Cent of Total
Agriculture	$ 51,677	$ 421,775	$ 90,425	$ 563,879	14.33%
Distributive	23,543	196,311	47,998	367,854	6,81
Home Economics	59,473	945,634	75,051	1,080,160	27.45
Health	19,142	142,044	9,121	170,308	4.33
Office Occuption	3,448	153,449	209,872	366,770	9.32
Technical	13,304	323,470	243,887	580,662	14.76
Trades & Industries	53,338	670,874	180,959	905,172	23.00
TOTAL	$223,925	$2,853,557	$857,313	$3,934,805	100.00%
Expenditures for Construction				$ 622,000	
GRAND TOTAL				$4,556,805	

Table 7

FINANCING OF VOCATIONAL AGRICULTURE PROGRAMS, 1964-65

	State and/or Local	Federal			Grand Total
		Smith Hughes	George Barden	Voc. Ed. Act of 1963	
Vocational Agriculture					
State Board	$ 19,257	$ ---	$32,420	$ ---	$ 51,677
State Teacher Education Insts.	35,887	3,166	7,910	4,950	51,913
Local Boards of Education					
Administ. - Salary(s)	2,011	---	414	860	3,286
Instruction					
Adult	2,646	---	4,182	---	6,829
Secondary	253,957	25,594	43,726	42,470	365,747
Post Secondary	11,844	---	---	11,844	23,689
Other Allowable Items	20,122	---	1,065	1,034	22,222
Instructional Equip. (Est.)	20,300	---	---	18,211	38,512
Total	$366,028	$28,760	$89,720	$79,370	$563,879

Table 8

FINANCING OF DISTRIBUTIVE EDUCATION PROGRAMS, 1964-65

	State and/or Local	Federal			Grand Total
		Smith Hughes	George Barden	Voc. Ed. Act of 1963	
Distributive Education					
State Board	$ 14,905	$ ---	$ 8,637	$ ---	$ 23,543
State Teacher Education Insts.	10,833	---	2,790	1,500	15,123
Local Boards of Education					
Administ. Salary(s)	3,597	---	1,135	---	4,733
Supervision	7,395	---	2,000	---	9,395
Instruction					
Adult	16,358	---	8,070	841	25,270
Secondary	22,392	---	1,502	20,890	151,847
Post Secondary	---	---	---	---	---
Others	4,990	---	---	74	5,065
Instructional Equipm. (Est.)	17,163	---	---	12,712	32,875
Total	$204,698	$ ---	$24,136	$39,019	$267,854

Table 9

FINANCING OF VOCATIONAL HOMEMAKING PROGRAMS, 1964-65

		Federal			
	State and/or Local	Smith Hughes	George Barden	Voc. Ed. Act of 1963	Grand Total
Vocational Homemaking					
State Board	$ 55,910	$ ---	$ 3,562	$ ---	$ 59,473
State Teacher Education Inst.	59,569	4,167	500	6,094	70,330
Local Boards of Education					
Administ. - Salary(s)	11,002	---	---	---	11,002
Supervision	23,495	----	---	---	23,495
Instruction					
Adult	196,668	6,230	22,212	579	225,689
Secondary	638,645	---	40,361	416	679,423
Post Secondary	---	---	---	---	---
Other	4,906	---	---	1,117	6,024
Instructional Equip.	2,471	---	---	2,249	4,721
Total	$992,670	$10,397	$66,636	$10,456	$1,080,160

Table 10

FINANCING OF HEALTH PROGRAMS, 1964-65

		Federal			
	State and/or Local	Smith Hughes	George Barden	Voc. Ed. Act of 1963	Grand Total
Health					
State Board	$ 7,956	$ ---	$11,185	$ ---	$ 19,142
State Teachers Educ. Inst.	895	---	180	644	1,720
Local Boards of Education					
Administ. - Salary(s)	3,393	---	934	----	4,327
Supervision					
Instruction					
Adult	3,633	---	816	1,541	5,991
Secondary	---	---	---	---	---
Post Secondary	91,492	---	31,692	8,420	131,605
Other	120	---	---	---	120
Instruction Equipment	3,783	---	---	3,618	7,401
Total	$111,274	$ ---	$44,810	$14,224	$170,308

Table 11

FINANCING OF OFFICE OCCUPATIONS PROGRAMS. 1964-65

	State and/or Local	Federal			Grand Total
		Smith Hughes	George Barden	Voc. Ed. Act of 1963	
Office Occupations					
State Board	$ 2,981	$ ---	$ ---	$ 467	36,448
State Teacher Education Inst.	---	---	---	---	---
Local Boards of Education					
Instruction					
Adult	20,481	---	---	10,936	31,417
Secondary	41,129	---	---	24,674	65,803
Post Secondary	27,369	---	---	27,347	54,716
Other	1,096	---	---	415	1,511
Instructional Equip.	118,326	---	---	91,545	209,872
Total	$ 211,383	$ ---	$ ---	$155,386	$366,770

Table 12

FINANCING OF TECHNICAL EDUCATION PROGRAMS, 1964-65

	State and/or Local	Federal			Grand Total
		Smith Hughes	George Barden	Voc. Ed. Act of 1963	
Technical Education					
State Board	$ 12,784	$ ---	$ 519	$ ---	$ 13,304
State Teacher Educ. Inst.	11,244	---	3,864	3,300	18,409
Local Boards of Education					
Administ. Salary(s)	16,409	---	4,322	---	20,732
Supervision	6,706	---	4,406	2,200	13,312
Instruction					
Adult	18,966	---	4,456	984	24,406
Secondary	---	---	---	---	---
Post Secondary	119,325	---	86,956	18,782	225,063
Other	20,283	---	7,134	12,537	39,955
Instructional Equipment	128,741	---	22,041	62,261	213,043
Guidance and Counseling Serv.	8,423	---	4,012	---	12,435
Total	$342,885	$ ---	$137,711	$100,065	$580,662

Table 13

FINANCING OF TRADES AND INDUSTRIES PROGRAMS, 1964-65

	State and/or Local	Federal			Grand Total
		Smith Hughes	George Barden	Voc. Ed. Act of 1963	
Trades and Industries					
State Board	$ 33,858	$ ---	$19,479	---	$ 53,338
State Teacher Educ. Inst.	14,076	2,667	2,598	2,730	22,071
Local Boards of Education					
Administ. - Salary(s)	18,779	---	2,896	2,516	24,191
Supervision	29,836	---	---	8,277	38,113
Instruction					
Adult	103,785	---	50,417	5,077	159,281
Secondary	128,445	24,920	---	29,568	182,934
Post Secondary	122,890	---	---	82,673	205,563
Other	41,823	---	2,307	16,658	60,790
Instructional Equipment	85,267	---	---	73,621	158,888
Total	$578,763	$27,587	$77,699	$221,123	$905,172

Vocational Course Offerings and Enrollments in the Secondary Schools

To find out specifically what the high schools and junior high schools are offering in vocational fields, the committee sought information on course offerings and enrollments, including non-reimbursable as well as reimbursable courses.

Table 14 shows statewide fall enrollments for the various vocational and vocationally related courses offered in Colorado secondary schools in 1964 and 1965. The figures were compiled from data gathered by the State Department of Education for accreditation purposes. A district-by-district breakdown was not possible from the available information.

The secondary schools enrolled between 190,000 and 200,000 students in each of the years covered. About 240 senior high schools and 150 junior high schools were in existence during this period.

Perhaps the most significant fact shown in Table 14 is that course offerings in most vocational and vocationally related areas are extremely limited. Most schools offer only minimum vocational offerings, concentrating on the basic and traditional courses and in many cases not meeting the standards for reimbursable programs.

Looking at the first section, which covers all reimbursable programs except office education, it is interesting to note that in 1965, over half of the male enrollment was in vocational agriculture -- 2,994 of 5,753. Nearly all of the female enrollment was in vocational homemaking -- 8,135 of 8,806. These figures are limited to those programs which have been designated "vocational" by the State Board for Vocational Education. Apart from agriculture and homemaking, these reimbursable vocational offerings were not widespread. Only 2,990 of the 14,559 enrollments in 1965 were in vocational mechanics, woodworking, machine shop, building trades, distributive education, general vocations, or other reimbursable programs.

In comparison, the non-reimbursable courses (and reimbursable office education courses not included in the first section) were much more common. The total enrollment in non-reimbursable practical arts courses (industrial arts, drafting, woodworking, metal working, electricity, mechanics, graphic arts, handicrafts, homemaking, and home and family living) was 103,541 in 1965. About one-third of these enrollees were in general homemaking courses. The total enrollment in business education courses was 72,872, with over half of these enrollees taking typing.

The number of enrollees does not necessarily indicate the number of students reached, because many students are enrolled in more than one of the courses listed.

Other information compiled by the State Board for Vocational Education bears out the fact that reimbursable programs in the high schools are limited. In 1964-65, there were only 411 instructors teaching reimbursable vocational courses in Colorado high schools, out of a total of over 5,000 high school teachers. They were distributed as follows:

Vocational agriculture	67
Trades and industries	59
Distributive education	38
Office education	93
Vocational homemaking	154
	411

Table 14

COURSE OFFERINGS AND FALL ENROLLMENTS IN VOCATIONAL AND VOCATIONALLY RELATED AREAS, 1964 AND 1965

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
VOCATIONAL EDUCATION*										
General Vocations										
Shop or Trade Mathematics	45	45	---	---	45	45	3	2	3	2
Trade Science	9	27	---	14	9	41	1	2	1	2
Gen. Voc. Shop I	198	176	---	---	198	176	10	9	8	7
Gen. Voc. Shop II	68	51	---	---	68	51	4	3	2	3
Gen. Voc. Shop III	11	28	---	---	11	28	1	2	1	2
Total General Vocations	331	327	---	14	331	341	19	18		
Vocational Agriculture										
General Agriculture	186	233	7	5	193	238	12	18	11	18
Voc. Ag. I.	860	886	---	---	860	886	62	67	61	64
Voc. Ag. II	752	693	---	---	752	693	68	62	62	59
Voc. Ag. III	632	671	---	---	632	771	60	56	54	49
Voc. Ag. IV	208	454	---	---	208	454	26	39	26	33
Voc. Ag. Related	---	57	---	---	---	57	---	4	---	1
Total Vocational Agriculture	2,638	2,994	7	5	2,645	2,999	228	246		
Vocational Mechanics										
Basic Auto Mechanics	302	469	---	---	302	469	24	39	20	27
Adv. Auto Mech.	89	102	---	---	89	102	8	13	6	7
Basic Auto Body Repair	112	52	---	---	112	52	14	9	9	6
Adv. Auto Body Repair	---	---	---	---	---	---	---	---	---	---
Basic Aircraft Mech.	---	---	---	---	---	---	---	---	---	---
Adv. Aircraft Mech.	---	---	---	---	---	---	---	---	---	---
Total Vocational Mechanics	503	623	---	---	503	623	46	61		
Vocational Woodworking										
Basic Carpentry	67	69	3	---	70	69	5	4	3	2
Advanced Carpentry	103	74	---	---	103	74	9	7	7	7

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
VOCATIONAL EDUCATION (Cont.)										
Basic Cabinet Making	38	19	---	---	38	19	2	1	2	1
Advanced Cabinet Making	22	23	---	---	22	23	2	1	2	1
Total Vocational Woodworking	230	185	3	---	233	185	18	13		
Vocational Machine Shop and Welding										
Basic Machine Shop	138	249	---	---	138	249	15	22	11	11
Advanced Machine Shop	24	56	---	---	24	56	4	4	2	4
Basic Welding	30	50	---	---	30	50	8	10	6	8
Advanced Welding	10	10	---	---	10	10	3	2	1	
Total Vocational Machine Shop, Welding	202	365	---	---	202	365	30	38		
Vocational Building Trades										
Basic Electricity	19	23	---	---	19	23	1	2	1	2
Advanced Electricity	---	1	---	---	---	1	---	1	---	1
Basic Electronics	81	59	---	---	81	59	8	8	8	6
Advanced Electronics	14	17	---	---	14	17	1	3	1	1
Basic Sheet Metal	---	11	---	---	---	11	---	1	---	1
Advanced Sheet Metal	---	---	---	---	---	---	---	---	---	---
Basic Bricklaying, Stonemasonry, Tilesetting	---	---	---	---	---	---	---	---	---	---
Adv. Bricklaying, Stonemasonry, Tilesetting	---	---	---	---	---	---	---	---	---	---
Basic Masonry	---	8	---	---	---	8	---	1	---	1
Total Vocational Building Trades	114	119	---	------	114	119	10	16		
Vocational Service Training										
Commercial and/or Adv. Art	---	---	---	---	---	---	---	---	---	---
Cosmetology	---	---	---	---	---	---	---	---	---	---
Barbering	---	---	---	---	---	---	---	----	---	---
Food Trades	---	---	---	---	---	---	---	---	---	---
Radio and/or TV Repair	---	---	---	---	---	---	---	---	---	---
Practical Nursing	---	---	---	---	---	---	---	---	---	---

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
VOCATIONAL EDUCATION (Cont.)										
Vocational Service Training										
Other Health Occupations -- Child Care, Dent/Med. Tech.	---	---	---	3	---	3	---	2	---	1
Refrig. and Air Condition.	---	---	---	---	---	---	---	---	---	---
Heating and Air Condition.	---	---	---	---	---	---	---	---	---	---
Misc. Services Trades	27	21	---	---	27	21	2	3	1	3
Total Vocational Service Training	27	21	---	3	27	24	2	5		
Vocational Graphic Arts										
Basic Printing	---	7	---	---	---	7	---	1	---	1
Advanced Printing	---	---	---	---	---	---	---	1	---	1
Basic Photography	7	---	3	---	10	---	1	---	1	---
Advanced Photography	---	---	---	---	---	---	---	---	---	---
Basic Cartography	---	7	---	---	---	7	---	1	---	1
Advanced Cartography	---	---	---	---	---	---	---	---	---	---
Total Vocational Graphic Arts	7	14	3	---	10	14	1	3		
Vocational Homemaking										
Homemaking I	13	3	2,941	3,494	2,954	3,497	186	230	104	121
Homemaking II	6	---	2,415	2,559	2,421	2,559	154	164	96	103
Homemaking III	---	8	1,105	1,145	1,105	1,153	84	87	96	67
Homemaking IV	---	4	218	356	218	360	23	36	21	32
Boys Home Living	14	120	---	---	14	120	1	7	1	3
Family Living	323	286	504	492	827	778	40	38	25	22
Senior Living	8	14	111	72	119	86	7	5	6	4
Needle Trade	---	---	---	---	---	---	---	---	---	---
Vocational Homemaking	2	---	34	17	36	17	3	2	3	2
Total Vocational Homemaking	366	435	7,328	8,135	7,694	8,570	498	569		

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
VOCATIONAL EDUCATION (Cont.)										
Other Vocational										
Distributive Ed. I	469	486	333	433	802	919	30	40	22	29
Distributive Ed. II	95	72	111	77	206	149	11	8	8	6
Diversified Occup. I	100	84	38	121	138	205	8	12	8	9
Diversified Occup. II	20	28	27	18	47	46	2	2	2	2
Total Other Vocational	684	670	509	649	1,193	1,319	51	62		
TOTAL VOCATIONAL EDUCATION*	5,102	5,753	7,850	8,806	12,952	14,559	903	1,030		
PRACTICAL ARTS										
Industrial Arts or General Shop										
I. A. or Gen. Shop (7-9)	11,284	10,628	199	64	11,483	10,692	574	559	101	92
I. A. I or Gen. Shop I	2,989	3,891	65	82	3,054	3,973	187	223	93	103
I. A. II or Gen. Shop II	872	1,186	20	1	892	1,187	76	90	60	66
I. A. III or Gen. Shop III	345	353	2	2	347	355	35	33	32	30
I. A. IV or Gen. Shop IV	62	143	---	---	62	143	9	18	9	16
Stagecraft	169	134	51	57	220	191	21	21	11	13
Total Industrial Arts or General Shop	15,721	16,335	337	206	16,058	16,541	902	944		
Drafting										
Drafting (7-9)	1,635	2,860	35	119	1,670	2,979	90	146	27	30
Mechanical Drawing I	3,594	3,285	275	122	3,969	3,407	231	182	107	103
Mechanical Drawing II	1,034	781	33	12	1,067	793	75	62	48	46
Mechanical Drawing III	324	268	5	4	329	273	15	17	8	14
Drafting I	2,240	2,214	123	101	2,363	2,315	120	117	53	57
Drafting II	722	718	14	11	736	729	44	45	30	36
Drafting III	126	150	2	2	128	52	9	12	6	11
Architectural Drawing	153	243	5	7	158	250	11	20	11	16
Engineering Drawing	125	157	3	5	128	162	10	11	7	8
Total Drafting	10,053	10,676	495	383	10,548	11,059	605	612		

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
PRACTICAL ARTS (Cont.)										
Woodworking										
General Woodworking (7-9)	7,304	8,478	192	---	7,496	8,478	367	417	71	81
Woodworking I	4,297	4,003	32	34	4,329	4,037	237	225	108	114
Woodworking II	1,821	1,854	1	17	1,822	1,871	117	125	78	84
Woodworking III	579	683	---	---	579	683	43	49	40	42
Woodworking IV	106	73	---	---	106	73	8	9	6	9
Carpentry I	32	54	---	---	32	54	---	7	3	5
Carpentry II	92	5	---	---	92	5	---	3	2	1
Carpentry III	---	---	---	---	---	---	---	---	---	---
Total Woodworking	14,231	15,150	225	51	14,456	15,201	779	835		
Metal Working										
General Metal (7-9)	3,826	4,942	---	---	3,826	4,942	183	225	29	39
General Metal I	2,193	2,292	1	2	2,194	2,294	116	146	48	55
General Metal II	484	538	---	---	484	538	32	34	24	26
General Mttal III	159	114	---	---	159	114	11	6	6	4
Welding I	125	79	---	---	125	79	19	10	11	7
Welding II	12	6	---	---	12	6	3	3	2	1
Machine Shop I	483	458	---	---	483	458	32	27	12	10
Machine Shop II	128	108	---	---	128	108	10	9	7	7
Machine Shop III	15	6	---	---	15	6	1	1	1	1
Total Metal Working	7,425	8,543	1	2	7,426	8,545	407	461		
Electricity and Electronics										
Electricity (7-9)	21	1,580	---	---	21	1,580	1	73	1	12
Electricity I	371	353	8	---	379	353	24	22	15	16
Electricity II	128	140	---	---	128	140	7	10	3	3
Electricity III	13	31	---	---	13	31	1	3	1	2
Electronics (7-9)	42	76	---	---	42	76	2	4	1	2
Electronics I	231	325	1	2	232	327	17	22	11	17
Electronics II	53	58	2	---	55	58	4	5	4	5
Electronics III	92	---	---	---	92	---	4	---	1	---

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
PRACTICAL ARTS (Cont.)										
Radio and Radio Theory	44	45	---	---	44	45	3	3	3	3
Total Electricity and Electronics	995	2,608	11	2	1,006	2,610	63	142		
Mechanics										
Power Mechanics (7-9)	32	1,618	---	3	32	1,621	1	74	1	13
Power Mechanics I	269	320	1	---	270	320	15	19	8	10
Power Mechanics II	23	33	---	---	23	33	1	1	1	1
Auto Mechanics I	1,159	1,072	6	---	1,165	1,072	71	66	32	32
Auto Mechanics II	118	162	---	---	118	162	11	13	9	10
Auto Mechanics III	127	---	---	---	127	---	6	---	1	---
Auto Body I	---	---	---	---	---	---	---	---	---	---
Auto Body II	---	---	---	---	---	---	---	---	---	---
Auto Body III	---	---	---	---	---	---	---	---	---	---
Total Mechanics	1,728	3,205	7	3	1,735	3,208	105	173		
Graphic Arts										
Graphic Arts (7-9)	289	997	56	155	345	1,152	17	47	5	10
Graphic Arts I	211	219	102	50	313	269	12	15	5	6
Graphic Arts II	54	42	50	10	104	52	5	3	2	3
Graphic Arts III	115	34	50	6	165	40	6	3	3	3
Printing I	337	152	13	20	350	172	18	10	7	6
Printing II	82	65	6	2	88	67	5	5	3	3
Photography (7-9)	57	166	14	99	71	265	4	13	2	7
Photography I	117	166	84	80	261	246	12	14	8	9
Photography II	---	1	---	2	---	3	---	1	---	1
Total Graphic Arts	1,322	1,842	375	424	1,697	2,266	79	111		
Handicrafts										
Handicrafts (7-9)	3,397	4,593	490	694	3,887	5,287	167	242	37	48
Handicrafts I	1,358	1,682	187	370	1,544	2,052	76	99	29	37
Handicrafts II	201	289	27	70	228	359	16	25	13	17
Handicrafts III	71	2	15	---	86	2	5	1	2	1

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
PRACTICAL ARTS (Cont.)										
Handicrafts										
Leathercraft I	642	348	11	14	653	362	36	23	14	11
Leathercraft II	55	25	---	---	55	25	2	4	2	2
Metalcrafts I	18	---	5	---	23	---	2	---	1	---
Plastic Crafts	---	540	---	---	---	540	---	24	---	4
Lapidary	17	32	14	1	31	33	3	3	3	3
Total Handicrafts	5,759	7,511	749	1,149	6,508	8,660	307	421		
Homemaking - Nonvocational										
Homemaking (7-9)	397	63	15,634	16,543	16,031	16,606	864	944	178	191
Homemaking (10-12)	51	34	1,951	1,848	2,002	1,882	149	146	76	67
Foods, (7-9)	---	5	3,987	4,508	3,987	4,513	171	201	28	29
Foods, (10-12)	38	66	2,460	2,475	2,498	2,541	120	123	32	34
Boys Foods	339	277	---	---	339	277	19	14	8	10
Clothing, (7-9)	166	---	3,693	4,262	3,859	4,262	167	194	26	30
Clothing, (10-12)	13	---	2,763	2,750	2,776	2,750	136	135	34	34
Total Homemaking - Nonvocational	1,004	445	30,488	32,386	31,492	32,831	1,626	1,757		
Home & Family Living										
Personal Living	110	34	174	44	284	78	11	6	5	3
Family Living	284	253	1,473	1,465	1,757	1,718	74	73	31	35
Home Management	4	17	389	328	393	345	17	16	14	13
Housing, Home Furnishing	---	---	365	301	365	301	15	14	11	10
Home Nursing	---	4	214	134	214	138	11	7	6	4
Nonvocational Agriculture I	9	40	---	---	9	40	1	4	1	4
Total Home & Family Living	407	348	2,615	2,272	3,022	2,620	129	120		
TOTAL PRACTICAL ARTS	58,645	66,663	35,303	36,878	93,948	103,541	5,002	5,576		

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
BUSINESS EDUCATION										
Basic Business										
General Business	2,709	2,685	3,502	3,286	6,211	5,971	252	257	138	127
Consumer Education	331	459	311	313	642	772	27	34	20	24
Business Management	66	80	156	164	222	244	8	10	6	8
Business Sales	137	199	112	130	249	329	11	16	9	13
Total Basic Business	3,243	3,423	4,081	3,893	7,324	7,316	298	317		
Business Math										
Business Math	1,460	1,648	1,831	1,948	3,291	3,596	132	146	62	72
Total Business Math	1,460	1,648	1,831	1,948	3,291	3,596	132	146		
Business English										
Business English	154	127	650	574	804	701	37	36	25	27
Total Business English	154	127	650	574	804	701	37	36		
Bookkeeping										
Bookkeeping I	2,968	3,040	5,780	5,383	8,748	8,423	375	366	209	210
Bookkeeping II	122	87	349	325	471	412	33	32	31	28
Bookkeeping III	---	25	---	22	---	47	---	4	---	4
Accounting I	17	53	37	46	54	99	3	5	2	2
Total Bookkeeping	3,107	3,205	6,166	5,776	9,273	8,981	411	407		
Typing										
Typing I	8,925	8,702	12,740	12,854	21,665	21,556	850	827	264	262
Typing II	875	855	3,967	3,931	4,842	4,786	259	258	155	158
Typing III	136	52	300	208	436	260	21	14	9	7
Personal Typing	3,755	4,606	3,884	4,978	7,639	9,584	261	339	61	68
Office Practice	210	238	2,561	2,146	2,771	2,384	227	209	122	118
Total Typing	13,901	14,453	23,452	24,117	37,353	38,570	1,618	1,647		

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
BUSINESS EDUCATION										
Stenography										
Shorthand I	167	172	6,034	5,986	6,201	6,158	299	314	170	182
Shorthand II	7	7	1,202	1,010	1,209	1,017	74	78	57	64
Transcription	1	5	329	279	330	284	18	18	13	15
Notehand	276	183	497	386	773	569	36	29	24	23
Secretarial Practice	30	19	1,073	820	1,103	839	75	67	52	45
Total Stenography	481	386	9,135	8,481	9,616	8,867	502	506		
Business Law										
Business Law	954	849	979	806	1,933	1,655	86	76	53	52
Total Business Law	954	849	979	806	1,933	1,655	86	76		
Business Data Processing										
Office Machines	45	51	493	792	538	843	35	55	18	28
Intro. to Data Processing	2	26	29	71	31	97	6	11	1	6
Data Proc. E. A. M. Equip.	7	13	19	25	26	38	1	2	1	2
Digital Computer Operating	---	11	---	15	---	26	---	1	---	1
Digital Computer Program	---	18	---	8	---	26	---	3	---	1
Total Business Data Processing	54	119	541	911	595	1,030	42	72		
Work Oriented Programs										
Student Assistants	368	527	1,065	1,225	1,433	1,752	332	425	49	55
Dist. Ed. I. (Nonvocational)	118	43	99	50	217	93	8	5	7	4
Dist. Ed. II (Nonvocational)	51	96	109	199	160	295	8	15	7	10
Other Work Experience	13	---	86	16	99	16	23	10	8	2
Total Work Oriented Programs	550	666	1,359	1,490	1,909	2,156	371	455		
TOTAL BUSINESS EDUCATION	23,904	24,876	48,194	47,996	72,098	72,872	3,497	3,662		

Table 14 (Cont.)

	Enrollment in Grades 7-12 As of October 1						Total No. Of Sections Of Course In State		Total No. Schools Offering Course	
	Boys		Girls		Total					
	1964	1965	1964	1965	1964	1965	1964	1965	1964	1965
FINE ARTS - HEALTH, P. E., DR. ED. - SPEC. ED.										
Specialized Art (Selected)										
Fashion Drawing	1	45	152	178	153	223	7	8	4	6
Design	20	21	36	86	56	105	5	6	3	3
Commercial Art	331	359	227	280	558	639	24	28	12	14
Total Specialized Art (Selected)	352	425	415	542	767	1,867	36	42		
MATHEMATICS										
Basic Mathematics (Selected)										
Shop Mathematics	203	231	---	10	203	241	10	11	7	7
Total Basic Mathematics (Selected)	203	231	---	10	203	241	10	11		
Vocations **	2,273	2,450	2,168	2,127	4,441	4,577	150	148	19	17
Total Vocations	2,273	2,450	2,168	2,127	4,441	4,577	150	148		

FIGURES SUPPLIED BY STATE DEPARTMENT OF EDUCATION. It should be noted that some schools may offer certain courses in alternate terms or alternate years, and that some schools will offer more than one section of a course in a single term.

*Courses classified under "Vocational Education" are those which meet requirements for federal reimbursement; however, none of the reimbursed office occupations courses are included here. Figures are not in exact agreement with State Board for Vocational Education figures due to differences in the time and method of reporting.

**The course entitled "Vocations" is a course in guidance and counseling offered primarily in the Denver public schools.

Area Vocational Education Schools

Under the federal Vocational Education Act of 1963, federal funds were made available for construction of "area vocational education schools." The State Board for Vocational Education was given the authority to designate area schools and distribute federal moneys on a matching basis. The State Board allocates $500,000 per year in federal funds for this purpose. No state funds are available for construction costs.

The federal law defines an area vocational education school as:

(a) A specialized high school used exclusively or principally for the provision of vocational education to persons who are available for full-time study in preparation for entering the labor market, or

(b) The department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are available for full-time study in preparation for entering the labor market, or

(c) A technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market, or

(d) The department or division of a junior college or community college or university which provides vocational education in no less than five different occupational fields, under the supervision of the State Board, leading to immediate employment but not leading to a baccalaureate degree.

The definition requires that an area vocational school be available to all residents of the state or an area of the state designated and approved by the State Board, and, in the case of a school, department, or division described in (c) or (d), that it admit as regular students both persons who have completed high school and persons who have left high school.

The idea of the area vocational school is to provide a vocational education program which will serve all the people in a given area, including students still in high school, persons who have dropped out of high school, persons who have graduated from high school but are not going on to college, persons who have left college, adults who need training or retraining either full-time or part-time, and persons with academic, socioeconomic, or other handicaps. Courses would be geared to preparation for employment and would not usually be transferable, even though for many persons they would be post-secondary. The area school would provide more than the average high school is equipped to handle and more than the average junior college is offering at the present time. It is a relatively new concept in vocational education for the state of Colorado.

Local groups have been formed to study possibilities for area schools in various parts of the state. The concept is being encouraged by the State Board for Vocational Education as a means of providing vocational education in areas which are not now adequately served. Study groups are working in the northeastern and southeastern parts of the state and on the western slope.

Two area vocational schools have already been designated for use of federal construction funds: the Boulder vocational technical center governed by a board of cooperative services comprised of representatives of the Boulder and Longmont school districts; and Trinidad State Junior College, where the junior college committee is the governing body.

The State Board for Vocational Education is charged with establishing policies as a basis for designating area vocational schools. The Board has stated that any school district, combination of school districts (meaning a board of cooperative services), junior college, or publicly supported four-year institution may be designated an area school if it meets the Board's standards and criteria. Also, the State Board itself may initiate and sponsor construction of area schools.

The following criteria are listed in the State Plan for use in determining priority of construction projects:

(1) The relative number of persons to be benefited;

(2) The geographic area to be served;

(3) The relative need for the type of school (high school, post-high school, etc.) to be established or improved;

(4) The relative need for the type of facility (classroom, libraries, shops, etc.) to be constructed or improved; and

(5) The relative need and opportunity for persons trained in the occupations or occupational fields to be served.

In its policy statement on area schools the State Board requires the following:

(1) A commitment to provide programs of vocational and technical education which meet the needs of all the people including:

    (a) Persons in high school;

    (b) Persons who have completed or left high school and who are available for full-time study in preparation for entering the labor market;

    (c) Persons who have already entered the labor market and who need training or retraining to achieve stability or advancement; and

    (d) Persons who have academic, socioeconomic, or other handicaps that prevent them from succeeding in regular vocational education programs.

(2) A comprehensive program of vocational offerings which will include a minimum of 15 different courses in no fewer than 5 occupational areas.

(3) An in-school population which would provide for a minimum potential of 225 selected students with specific vocational objectives to be enrolled in the vocational curriculums.

(4) Evidence of adequate facilities and personnel to conduct the program outlined in No. 2 above, or detailed plans for the acquisition and staffing of such facilities and programs, including specific arrangements for financing, initially and continuing, a time-table for accomplishment, and an outline of the administrative and supervisory structure.

(5) Details of the plan for cooperation among districts if two or more districts are parties to the application, including arrangements for financing, basis on which students from other districts will be accepted, administrative procedures, student transportation, etc.

(6) Evidence that there will be a continuing and ongoing need for this kind of institution in the area and of the ability of the district to maintain such an institution on an indefinite basis.

These policies of the State Board have been formulated with much more than the small amount of federal aid in mind. Federal construction funds of $500,000 per year will not go very far toward building area vocational school facilities around the state. The federal aid is intended to serve only as an incentive to state and local effort, and the State Board is attempting to build the area school concept in Colorado, encouraging state and local action based on the seed provided by the federal grants.

Apart from the designation of junior colleges as area vocational schools, the present statutory authority for establishment of area vocational schools is the 1965 state law on boards of cooperative services. Under this law a number of school districts can join together, elect a cooperative board, and conduct a cooperative program. Since boards of cooperative services do not have the power to levy taxes, local financing must be from each of the participating districts.

As area schools become operative they are eligible to receive federal aid for instructional programs. Nevertheless, the bulk of the financial burden falls on the sponsoring school districts or junior college. Under present policies, very little state aid is available specifically for the vocational programs conducted in the area school. The state provides only general purpose aid to the participating school districts and junior colleges.

The State Board is encouraging the development of area vocational schools through local initiative. It is doubtful, however, whether this method will serve the need in the parts of the state most in need of vocational facilities. Some areas have failed to show any local interest in the program. One of these has been the Denver metropolitan area, where the same difficulty has been encountered in attempts to establish junior colleges through local initiative.

The area vocational school concept is not yet fully established in this state, but developments will soon make the State Board's policy irreversible. It seems apparent that if area schools continue to develop, the state will eventually be asked to provide a large share of financial assistance both for capital construction and for operation. There is also likely to be a request for legislation granting tax-levying authority to boards of cooperative services. If present trends continue, the area vocational school will be established in a few years as a new type of institution in Colorado, representing a new level in the educational structure.

Vocational Education in the Junior Colleges

The committee looked at the 1965-66 statistics on vocational education in the state's six operating junior colleges. Most of the information was taken from a recent report by the State Department of Education, "Community Junior Colleges, 1963-64 through 1965-66." The junior colleges covered were:

Lamar Junior College	Lamar
Mesa Junior College District Mesa College	Grand Junction
Rangely College	Rangely
Northeastern Junior College	Sterling
Otero Junior College	La Junta
Trinidad State Junior College	Trinidad

Each of the six operating junior colleges is run by a local junior college committee and each attempts to follow the traditional junior college concept of offering: (1) transfer courses; (2) terminal courses; (3) adult education; and (4) community services.

In general, the statistics indicated that vocational programs are much smaller than academic programs in the junior colleges. This is not encouraging to those who would like to rely on the junior colleges for all post-secondary vocational education. Junior colleges are not yet available in all the places that need them most, and it appears that where they are available they are not emphasizing vocational programs. If reliance is to be placed on the junior colleges to provide adequate vocational education, action will have to be taken to change current trends.

Table 15 compares 1965 academic and vocational enrollments It shows that in the six junior colleges taken as a whole, 1,322, or 22.3 per cent, of the day students are in terminal vocational programs, compared with 4,596, or 77.7 per cent, in academic programs. Among adult students the reverse is true: vocational courses claim 75.3 per cent while only 24.7 per cent are in academic courses. Trinidad has the highest percentage of vocational students in the day program (44.8 per cent) and Mesa has the lowest percentage (11.7).

Table 16 shows the types of vocational courses offered at each school and the spread of enrollments in these courses. Many kinds of vocational and technical programs are included. Secretarial science, data processing, and electronics technology lead the list.

The major sources of junior college financing are: (1) state aid of $500 per F.T.E.; (2) local tax moneys; and (3) student fees. Federal and state aid earmarked for vocational education programs amounts to a very small proportion of the total junior college costs. For 1964-65 the six junior colleges together received only $103,290 in state and federal funds earmarked for vocational education. This is only slightly over three per cent of the total current operating expenses.

Table 15

PERCENTAGE COMPARISON OF ENROLLMENTS (HEAD COUNT) ACADEMIC AND VOCATIONAL COURSES: FALL 1965

College	Day program		Adult education program	
	Number	Percent	Number	Percent
Lamar				
Academic (Transfer)	446	77.3	28	28.0
Vocational (Terminal)	131	22.7	72	72.0
Total	577	100.0	100	100.0
Mesa J. C. District				
Academic	1,786	87.0	313	41.6
Vocational	268	13.0	439	58.4
Total	2,054	100.0	752	100.0
Mesa College				
Academic	1,602	88.3	313	41.6
Vocational	213	11.7	439	58.4
Total	1,815	100.0	752	100.0
Rangely College				
Academic	184	77.0	0	-
Vocational	55	23.0	0	-
Total	239	100.0	0	-
Northeastern				
Academic	1,271	82.5	0	0
Vocational	270	17.5	243	100.0
Total	1,541	100.0	243	100.0
Otero				
Academic	432	78.8	45	18.5
Vocational	116	21.2	198	81.5
Total	548	100.0	243	100.0
Trinidad				
Academic	661	55.2	75	14.2
Vocational	537	44.8	452	85.8
Total	1,198	100.0	527	100.0
All colleges				
Academic	4,596	77.7	461	24.7
Vocational	1,322	22.3	1,404	75.3
Total	5,918	100.0	1,865	100.0

Note: See Table 16 for details

TABLE 16

ENROLLMENT (HEAD COUNT) ACADEMIC AND VOCATIONAL COURSES: FALL 1965

Type of Program	Lamar		Mesa J. C. District		Mesa College		Rangely College		Northeastern		Otero		Trinidad		All Colleges	
	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.	Day	Adult Educ.
Academic (Transfer)	446	28	1,786	313	1,602	313	184		1,271		432	45	661	75	4,596	461
Vocational-Technical (Terminal)	131	72	268	439	213	439	55		270	243	116	198	537	452	1,322	1,404
T- Agricultural Business	8								71						79	
V- Auto Body Maintenance	3		10		10								35		48	
V- Auto Mechanics (inc. Diesel Mech.)	27	7	10		10				20				34		91	7
V- Building Trades													29		29	
T- Chemical Technology													36		36	
T- Civil Engineering Technology									24		4		14		42	
T- Computer Maintenance Technology													6		6	
V- Cosmetology	30												25		55	
V- Court Reporting	2														2	
T- Data Processing Technology	13	8	38		38						47	23	35	17	133	48
T- Dental Hygiene			35				35								35	
T- Drafting and Design Technology											9		32	16	41	16
T- Electronics Technology	11	16	9				9		26				74	20	120	36
V- General Business	14								40		8	17	26		88	17
V- Gunsmithing													81	13	81	13
V- Homemaking										77				63		140
T- Law Enforcement Technology													54		54	
T- Mechanical Engineering Tech.											1				1	
V- Medical Office Assistance	1		13		13					21					14	21
V- Practical Nursing Program			17		17				18				16		51	
T- Registered Nursing (2 years)			54		54										54	
V- Secretarial Retraining			21		21										21	
V- Secretarial Science	17	10	61		50		11		45	15	47	37	40	30	210	92
Others (See note.)	5	31		439		439			26	130		121		293	31	1,014
Grand Total	577	100	2,054	752	1,815	752	239	0	1,541	243	548	243	1,198	527	5,918	1,865

Note: Lamar: Airline Hostess, Firemanship, and Appliances
Northeastern: Personal Interest, Agriculture, etc.
Otero: Reading, Painting, Conversational Spanish, etc.
Trinidad: Creative Writing, English Review, Math. Review, Reading, etc.
Mesa: Not itemized

T = Technical
V = Vocational

Metropolitan State College

The committee was especially interested in discovering what Metropolitan State College is doing and plans to do in the future in the vocational-technical areas. The following are excerpts from a written report presented by Metro officials describing the programs in the applied sciences:

> "'First of all, Metropolitan State College must provide two-year terminal occupational curriculums. As pointed out in other sections of this report, it is the purpose of these courses to provide a relatively complete preparation for an occupation in curriculums of less than than Bachelors degree length.'[1]

"Metropolitan State College, in accepting the mandate to serve the needs for higher education in the metropolitan Denver area, is perfecting a broad spectrum of offerings. The faculty and administration of the college have developed the programs herein described. They are the result of careful study of the needs of business and industry. At the same time, the college continues to be sensitive to the interests and abilities of the students it serves. ...

"In developing these programs, uniform and well established study and research and procedures were followed. Starting with meetings of interested groups, a general "feel" for trained manpower needs in a particular field was acquired. Contact was made with the Colorado State Department of Employment to further explore critical shortage areas, actual demand and availability of potential employees. In those occupations where it was reasonably evident that a need existed, an ad hoc liaison committee was called together. ...

"As background information for the meeting with the liaison committee, letters were written to colleges throughout the country that had programs similar to those being studied. Well over one hundred such contacts were made. The information acquired was of considerable value in further curriculum development. Offerings in Colorado colleges and universities were also analyzed.

"When the need for a program was verified it then was determined whether it was within the scope and function of an institution such as Metropolitan State College. Those studies that met all of the criteria were then considered from the point of view of the students. Factors given attention included:

---

1. Trustees' Report on the Plan of Operation 1963.

What are the employment opportunities, locally and regionally?

What is the salary and earning potential?

What is the "image" of the occupation?

What is the future growth; is it on the increase or decrease?

How rigorous is the preparation?

How long does it take to complete the program?

What is the total cost to the student?

The programs were developed with careful study given to their relationship to the total college. Serious consideration was given to the offerings of the other state colleges and the implications were evaluated in terms of duplication and specialization. Recognition was given to the concern that some institutions may be best for a particular program or for a particular field.

"Each curriculum has some inherent concepts and problems that are unique, yet all of them have been carefully analyzed in the following manner:

Facilities, space required, cost, location and usage, laboratory and classrooms.

Curriculum, the content, the options and specializations, texts and course outlines.

Equipment and supplies, cost, availability, community resources, rental or lease, contributions.

Instructional personnel, qualifications, availability, full-time and part-time, competence and degrees, administration.

Accreditation agencies, North Central, professional, regional, certification, approval agencies.

"The following terms have been uniformly applied in all of the curricula and are described hereto:

Terminal:
Programs approximately two years in length that generally lead to an Associate in Applied Science degree. They are developed to provide the student with both a basic general education and a high

degree of occupational competence so that he may enter employment immediately upon graduation. It should be noted that terminal programs are an entity in themselves and are not the same as the lower division of a four-year program. They are designed to serve students, who for any reason may not wish to pursue a four-year program.

Basic Studies:
To insure that each graduate has certain skills in communication, computation and an understanding and appreciation of his responsibilities in society he must satisfactorily complete the following to satisfy the general education requirements.

English	9 Credit Hours
Mathematics	5
Humanities	3
Social Science	3
Physical Education	3
Laboratory Science	4-5
TOTAL	27-28 Credit Hours

Occupational Competence:
The primary objective of a student in a terminal program is to become employable in his chosen occupation. Placing the program within the framework of a college meets an expressed need of employers. By devoting nearly two-thirds of the student's program to developing occupational competence, his entry into the world of work is at a much higher level. Raising the entry level of employment, coupled with the basic studies, enhances the student's promotional opportunities. This, too, has been verified by employers.

Work Experience:
Most programs that effectively prepare students for employment recognize the desirability of true on-the-job experience. Traditionally, nursing, x-ray technology, and similar fields have required clinical experience to supplement classroom instruction. This same concept is an inherent part of most programs in the Applied Sciences. Work experience or field experience is a program carefully developed jointly between employers and the college. Its purpose is to provide the student with a selected variety of experiences closely related to his field of preparation. Close supervision by the college must be provided. In some instances, the student may receive pay for his work; in other cases, pay may not be appropriate. The extent and amount of work experience will vary with

> the occupation. In some situations it may be full-time, eight hours a day, for a quarter at a time. Other programs may better serve students through two or three hours a day. Recommendations of the liaison committees provides guidance in this area.

"In implementing the programs, two concepts guide the college. These principles are flexibility and excellence. The flexibility to best meet the needs of the greater Denver area, as well as the State of Colorado. Excellence, to guarantee that the student is assured of quality programs from which he may embark upon a satisfying career.

"The purposes and objectives of Metropolitan State College, as stated in Chapter 249, S. L. 1963, indicate that the college is to be a multipurpose institution offering a wide variety of undergraduate curricula to meet the needs of a large student body with a wide range of abilities and interests. The college is to be particularly responsive to the educational needs of the people of the Denver metropolitan area. But, because of the mobility of the population in Colorado, it is also necessary that the plan anticipate students from other parts of the State.

"Concurrent with the studies for needed terminal occupational programs has come an awareness of an urgent need for four-year baccalaureate degree programs."

The 1966-67 curricula and courses in applied sciences were listed in detail. The curricula include the following:

Division of Business
- Accounting
- Marketing
- Management
- Secretarial
- Business Data Processing
- Office Management

Division of Health Services
- Registered Nursing
- X-ray Technology

Division of Public Services
- Police Science
- Culinary Arts
- Ornamental Horticulture

Division of Technology
- Aerospace Engineering Technology
  - Airframe and Power Plant Option
  - Professional Pilot Option
- Civil Engineering Technology
- Drafting Engineering Technology
- Electrical-electronic Engineering Technology
- Mechanical Engineering Technology.

In addition the committee asked for a discussion of the different levels of vocational-technical education and the role of Metropolitan State College in each. The following definitions were submitted:

"Vocational:

Vocational Education has but one controlling purpose: the preparation of persons for useful employment. In meeting this purpose, it is designed to serve three distinct groups. Those who are already employed, those who are unemployed, and those who are preparing for initial employment. It deals with all aspects of occupational intelligence with special attention to the acquisition of skills, understanding, attitudes, and abilities that are necessary for entry upon and for successful progress within an occupation.

Vocational Education usually refers to the high school and post high school programs that develop an entry level skill. Typical programs of this type would include:

1. High school vocational education courses, such as vocational agriculture or clerk-typist.

2. Post high school vocational training that does not include any general education, such as that provided through adult schools. Examples: Welding, P.B.X. operator.

3. MDTA and other similar programs supported by state and federal funds. Examples: Power sewing, service station operator.

4. Apprenticeship type programs. Examples: Plumber, carpenter, sheet metal worker.

"Technical:

The following characteristics reflect a commonly accepted definition of the highly skilled technical occupations which require scientific knowledge.

1. The occupations lie between that of the skilled crafts (vocational) and the scientific profession. The occupation requires technical competency based upon specialized intensive training in technical subjects involving the direct application of functional aspects of related sciences and mathematics.

2. The technician holds a key spot between the engineer and the craftsman in industry; between theory and production. The work is technical in nature but narrower in scope than that of the engineer or scientist, and has a practical rather than theoretical orientation. Frequently, technician jobs require use of complex electronic and mechanical instruments, experimental laboratory apparatus, drafting instruments, tools and machinery. Technicians may be employed as superintendents, foremen, inspectors; or they may be estimators required to do complex calculating and estimating. They may be designers needing advanced technical skills and knowledge. They are people who are trained in the technologies in their respective operations but usually are neither graduate professional engineers, nor expert craftsmen, although they have competency in both areas.

3. Engineering has been called a "method of thinking." By implication then, a technician who is part engineer or scientist by nature and training is also a thinking member of the team. He must possess educated "know-why," as well as plenty of "know-how." The training needed for successful employment as a technician in industry is normally two years of full time collegiate instruction beyond high school. Some technical jobs require only one year, others as many as four years.

"Semi-Professional:

The semi-professional curricula are for those students desiring to limit their college education to two years. Metropolitan State College has the responsibility to produce college trained graduates who are qualified to enter an occupation and equipped to dispatch the duties of citizenship in a democratic society. Each student in the semi-professional program will be a better citizen and a more competent specialist if his education includes general education and occupational competence.

The various occupational curricula are planned for students whose vocational goal is related to the two year terminal program. Each curriculum is so designed as to give that breadth of understanding which is essential to personal and civic effectiveness.

> The student seeking this type of occupational competence will find that these curricula enable him to gain a mastery of the skills essential for initial employment and a thorough knowledge of the subject matter that will equip him for promotional opportunities and include some general understandings through a pattern of courses containing communications, orientation to the world of work, and general education electives from the humanities, and/or the social and natural sciences."

It seems clear that Metropolitan State College is attempting to provide the semi-professional and technical but not the vocational curricula described above.

Emily Griffith Opportunity School

The committee, knowing that Denver's Emily Griffith Opportunity School has received nationwide recognition as a model of adult and occupational education, visited the school and reviewed the statistical information provided.

Opportunity School is part of the Denver public school system and is governed by the Denver board of education. It is financed in the same manner as other schools in the system. The annual operating cost is over $1,850,000.

Denver residents over 16 years of age may attend Opportunity School without payment of tuition. The only costs to a student living in Denver are books, tools, and incidental fees. Persons from outside the Denver city limits must pay tuition of ninety cents per class hour.

Many of the classes have waiting lists, but in most cases the waiting period is relatively short. Denver residents are always given priority over non-residents on waiting lists; consequently, non-residents seldom have a chance to enroll in the most popular courses. One exception to the low priority of non-residents is when a Denver business firm makes arrangements for employees (including non-residents) to take a class necessary to their job. In this case, the non-resident employees are given priority on waiting lists and usually receive tuition waivers.

Opportunity School is primarily a place where adults can go for vocational, academic, and hobby courses, either day or evening. There are no special educational or other entrance requirements and there is no prescribed course of study. Persons may choose the courses that meet their individual needs. In some cases, students from Denver high schools are permitted to spend part of the school day at Opportunity School studying specific vocational subjects, but this is not a very large part of the total program.

The school holds day and evening classes all year, offering approximately 300 different subjects in eight broad areas. Instruction is highly individualized and students may progress at their own rates of speed. Because of the nature of the program, the school does not keep enrollment figures comparable to those of other schools. The available figures show "registrations" in individual courses by departments but do not indicate average attendance or membership or full-time equivalencies. The basic registration information published by the school is given in Table 17.

The program at Opportunity School is extremely flexible. One of the ways the school keeps up with changing needs is through its advisory committees, made up of men and women who are expert and experienced in specialized fields -- professional and non-professional, employers and employees. They make recommendations to keep the school's equipment, instruction, teaching methods, and standards modern and meaningful.

An Opportunity School pamphlet states:

> Committee functions are varied and extensive. Members may recommend possible instructors, the selection of a classroom, of shop equipment, or of instructional materials. They may advise on the number of trainees who can be satisfactorily handled in a class. They may prompt the formation of new or special classes. In trades and other areas, where certification of students is an important end result of their instruction, the advisory committees are invaluable in helping determine the standards for such certification. Unlimited supplementary information and materials, publications, surveys, and bibliographies are supplied to the school faculty through the committee members.
>
> Of prime importance is the committees' effort to promote cooperation between Opportunity School and business, industry, government, and civic groups in the area. The constructive criticism and forward thinking of the committee members is of tremendous value to the school. Committees provide accurate and intelligent information to school administrators. They can often foresee and resolve potential problems. Their interest in the school stimulates the faculty toward the best possible teaching. They better understand the financial demands of the public school system because they are fully aware of the operating costs.

Opportunity School offers vocationally oriented courses in business education; distributive education; and trades, industrial, and technical training. Also included in the program are regular high school courses, homemaking, and general education, but these are not particularly vocational in nature.

Business education covers the wide range of office skills such as bookkeeping, shorthand, typing, business English, business mathematics, and the use of posting and calculating machines, I.B.M. card punch, and data processing equipment.

Distributive education trains men and women who will be working directly with the public in such occupations as selling, supervisory training, insurance, real estate, medical and dental assistants, graphic arts, traffic management, and food service. Denver high school seniors can also take a cooperative distributive education course which offers on-the-job training as well as in-school education.

Trades, industrial, and technical training prepares men and women for employment in industry by giving training on machines with materials commonly used. In many cases, actual production jobs, with emphasis on training, are accomplished in the shops or classes. The school offers, for those already employed in industrial occupations, an opportunity to supplement experience through training classes which are set up for this purpose.

Many apprenticeship and journeyman training courses are offered at Opportunity School. Apprenticeship training involves related instruction and laboratory classes operated in cooperation with skilled trade joint advisory committees for registered indentured apprentices. Committees are composed of equal representation from labor and management concerned with a specific trade. Standards for apprenticeship programs are formulated by local committees to comply with state and federal laws. Manual skills are learned on the job during the day and related instruction is taught at the school, principally at night.

A student survey conducted by Opportunity School in 1965 showed that about 40 per cent of the students are employed full-time and another 10 per cent are employed part-time. About 14 per cent are unemployed. Thirty per cent of the students gave "job advancement" as their main reason for attending Opportunity School. Fifteen per cent said they were attending to "get a job." Approximately 70 per cent of the students attend Opportunity School only four hours or less per week.

Thus it appears that a large part of the Opportunity School program is part-time adult education to help persons advance occupationally. A relatively small part of the program appears to be full-time pre-entry vocational education.

Table 17

Opportunity School Registrations, 1965-66

Total Registrations 43,785

By Division

	Day		Evening		
	Male	Female	Male	Female	TOTALS
Parent Education & Preschool		5,144			5,144
Summer High School	145	247	111	46	549
Regular High School	898	2,215	869	517	4,499
MDTA - Regular School	597	964	304	82	1,947
MDTA - Summer School	312	178	187		677
Summer School	525	1,018	265	567	2,375
Regular School	3,237	9,391	8,190	7,776	28,594
	5,714	19,157	9,926	8,988	43,785

By Departments

	Totals	Percent
Apprenticeship	2,505	6
Business Education	9,365	21
Distributive Education	3,308	8
General Education	5,793	13
High School	5,048	12
Homemaking Education	5,740	13
Trades & Industrial Ed	6,870	16
Parent Education & Preschool	5,144	11

Arts and Crafts Registrations.	1,305 (less than 3% of total registrations)
Knitting, Weaving, Cake Decorating, Millinery, Flower Arrangement	1,722 (less than 3.9% of total registrations)

MDTA Classes	
Auto Service Station Mechanic.	41
Basic Education	397
Basic Education (Title IIB)	1,181
Computer Programmer	125
Cook, Short Order	14
Licensed Practical Nurse	33
Medical Record Assistant	228
Medical Secretary	100
Nurse Aide	37
Household Services	165
Individual Referrals	
Barbering	1
Cosmetology	1
Shoe Repair	2
Small Appliance Repair	4
Machine Operator	80
Shoe Repairman	28
	2,437

80% of these people graduated and **74%** of these were placed on jobs.

Apprenticeship Programs

Long before the recent concern over vocational education and the increased federal support for vocational training programs, a cooperative effort at the state and national level between labor and management was being made to train young men in apprenticeable trades. In Colorado, such a program was organized in 1939 under the direction and control of the State Board for Vocational Education. In 1961, administration of the apprenticeship program was shifted to a joint labor-management Apprenticeship Council established within the State Industrial Commission.

With the 1961 change in the law, state apprenticeship activities were brought in line with national apprentice standards under which minimum qualifications are administered by the department of state government responsible for employer-employee relations. Now that Colorado is under the national program there is no question that registered apprenticeship in the state is recognized nationwide.

Provisions of the Law

Definition of Apprentice. As defined in section 9-1-1, C.R.S. 1963, an apprentice is a person at least sixteen years of age who has entered into an agreement:

> with an employer, an association of employers, an organization of employees, or their agents, or a joint apprenticeship committee, which apprenticeship agreement provides for not less than four thousand hours or two years of reasonable continuous employment for such person and for his participation in an approved program of training through employment and through related education and technical instruction.

Functions of the Colorado Apprenticeship Council. Colorado law states that the Apprenticeship Council -- within the Industrial Commission -- shall consist of six members appointed by the governor and shall be representative of employers and employees. Each member is appointed for a term of three years and serves without compensation. One representative each from the State Board for Vocational Education, the Colorado Department of Employment, and the U. S. Department of Labor's Bureau of Apprenticeship and Training may be designated by the Apprenticeship Council as advisors.

In essence the functions of the Council are:

> to seek voluntary cooperation of labor and management in the promotion of apprenticeship, and to assist both groups in establishing training programs;

to identify and publish the fundamentals of apprenticeship to be followed by registered participants, which in no case shall be less than the fundamentals as set forth by the national apprenticeship program of the federal committee on apprenticeship and to provide the means for recognizing programs which meet those fundamentals;

to provide for the registration, cancellation or suspension of apprenticeship agreements under recognized programs and issue certificates of completion of apprenticeship when the provisions of the standards and agreement have been met successfully;

to approve all policies and procedures established as a result of the apprenticeship law, and to develop and have published data pertaining to apprenticeship.

Apprenticeship Committees. An apprenticeship program may operate under conditions ranging from a small shop employing one apprentice to a large plant employing many apprentices or an area training program in, for example, the construction industry involving a number of contractors, labor organizations and crafts. The administration of programs varies not so much according to the number of apprentices in a program or the size of the employer's enterprise, but instead according to the agreement that has been worked out between management and labor. Administration usually falls into one of four general types:

Employer-administered programs exist where employees express the desire to have management conduct the apprenticeship program; or, where there is no employee organization, management formulates and registers the apprenticeship standards. (As of January 1, 1966, there were 66 employer-sponsored apprenticeship programs in Colorado.)

Employee-administered programs exist where management waives its rights to participate in an apprenticeship program which has been established in a bargaining agreement.

Craft joint apprenticeship committee administration is used in programs currently training the largest number of apprentices. (As of January 1, 1966, there were 84 joint labor-management plant apprenticeship committees in Colorado.) Under such a system an apprenticeship committee is composed of equal representation from management and organized labor.

Area apprenticeship committee administration is characteristic of the administration of apprenticeship programs in the construction and printing industries. During a four or five year training period, apprentices may be on the payroll of many different employers and at the same time be rotating through the various work phases of the trade. Since an individual contractor cannot supervise the training of an apprentice after he has left the contractor's employment, area or statewide standards and cooperation are part of the policies of the area joint committee.

Variations from the agreements described above are also practiced: there may be an area apprenticeship program with no union participation or the union may have waived its right to participate.

How Is A Program Established?

Registration of an apprenticeship program with the Colorado Apprenticeship Council is voluntary. Registration is similar to accreditation and not all programs meet the standards. There are some 300 apprenticeable occupations registered with state apprenticeship agencies or the Bureau of Apprenticeship and Training.

An employer interested in establishing a registered apprentice program contacts the Director of the Colorado Apprenticeship Council who, in cooperation with the employer, directs the drawing up of the so-called apprentice standards for that particular program. The apprentice standards must contain the following minimum fundamentals in order to be recognized by the Apprenticeship Council:

1) The starting age of an apprentice not less than 16;
2) Full and fair opportunity to apply for apprenticeship;
3) Selection of apprentices on the basis of qualifications alone;
4) A schedule of work processes in which an apprentice is to receive training and experience on the job;
5) Organized instruction designed to provide the apprentice with knowledge in technical subjects related to his trade (a minimum of 144 hours per year is normally considered necessary);
6) A progressively increasing schedule of wages;
7) Proper supervision of on-the-job training with adequate facilities to train apprentices;
8) Periodic evaluation of the apprentice's progress, both in job performance and related instruction, and the maintenance of appropriate records;
9) Employee-employer cooperation;
10) Recognition for successful completions; and
11) Non-discrimination in all phases of apprenticeship and employment.

Other program fundamentals are established by the employer. The length of apprenticeship programs is determined at the national level by the Bureau of Apprenticeship and Training.

The following has been found to be typical of the basic requirements predetermined by various program sponsors:

1) Age - Local apprenticeship program standards specify upper as well as lower age limits; for example, 16-25. Exceptions to the age requirements might be provided in the case of work experience, service in the armed forces, and unusual qualifications.

2) Education - A specific level of educational attainment is usually required. Most sponsors require a high school diploma or satisfactory grades on an official high school equivalency test.

3) Physical Ability - A physical examination or evidence of physical fitness sufficient to perform the work of the trade may be required.

4) Tests - Applicants are usually required to take specified tests to measure achievement, as in mathematics and science; aptitudes, both mental and manipulative; and performance, relative to the trade or craft. The aptitude tests may be given by the local State Employment Service office. Some program sponsors administer their own tests.

5) Other - Qualities, such as motivation, ambition, willingness to accept direction, interest, character, judgment, cooperativeness, and similar factors which promise successful completion of the individual's apprenticeship and performance as a journeyman, are taken into consideration.

Information regarding the apprenticeship program is posted in the participating employer's plant or office, labor union offices, local offices of the State Employment Service and at public schools throughout the state. Application blanks are secured from the program sponsor. When an apprentice opening occurs, interested candidates are required to take qualifying aptitude tests and personal interviews are conducted by the prospective employer. The interview encompasses educational background, attitudes toward work and apprenticeship, sense of responsibility, physical condition, and other like factors.

The student must be interested in spending a minimum of two years or 4,000 hours in on-the-job formal training. The majority of the trades require 8,000 hours or four years of training. The apprentice must also be willing to attend school for 144 hours per year for supplemental related classroom instruction in the technical and theoretical aspects of the skilled trade.

How Does the Program Operate?

If an applicant is accepted, he is required by the program sponsor (employer, union, or committee of labor and management) to sign an apprenticeship agreement specifying the term of apprenticeship, wages received, work to be taught, and information regarding the supplemental classroom instruction.

The apprentice becomes an employed worker whose training is received on the job under close supervision. Increases in wages and periods of advancement are commensurate with his developing skill. Examinations are given at the end of every six-month period. Apprenticeship standards drawn up by the program sponsor provide for a probationary period of thirty days to twelve months during which time the apprenticeship agreement may be cancelled by either party.

To supplement the on-the-job training, apprentices are required to attend classes of related instruction or enroll in reputable correspondence courses. Instruction is often given in public or private schools, but program sponsors more often provide their own instructors and instruction facilities. Apprentices are required to attend classes at night, four hours each week, for approximately 144 hours each year. The instruction includes technical and theoretical subjects such as safety laws and regulations, mathematics, draftsmanship, blueprint reading and sciences connected with the trade.

The State Board for Vocational Education reimburses the local schools instructing apprentices at 40 per cent of the instructors' salaries. (In fiscal 1966 this amounted to $47,000 in Colorado.) Many local schools furnish classroom facilities at no cost. Thus the program sponsor pays 60 per cent of the instructor's salary and the cost of any other materials necessary.

When the program sponsor certifies that an apprentice has fulfilled the training program satisfactorily, the apprentice is awarded a trade certificate by the Colorado Apprenticeship Council. With the completion of a registered apprenticeship program, the individual is regarded as an acceptable craftsman able to take over the job he has been trained for or to compete successfully for the same job in the open market.

Apprenticeship Training in Colorado

The costs of conducting apprenticeship programs are borne almost entirely by the employers and program sponsors. Public funds are not involved in the conduct of programs except for reimbursement of part of the cost of the related instruction. The only other cost to the taxpayers is for promotion of programs and administration of standards.

The Colorado Apprenticeship Council operated on a budget of $19,540 in fiscal 1966 and has $20,973 for fiscal 1967. The U. S.

Bureau of Apprenticeship and Training is spending approximately $63,000 a year on Colorado programs, maintaining a staff of four professional men for the state. In addition, the State Board for Vocational Education spends about $1,675 annually for administration of its part of the apprenticeship programs.

According to the latest information available, Colorado ranks among the top twenty states in the number of registered apprentices per 100,000 non-farm workers. As of January 1, 1966, there were 2,103 apprentices in Colorado programs, most having been enrolled in programs for longer than one year. (See Table 18.) In the calendar year 1965 in Colorado there were 585 new registrations of apprentices, 394 suspensions or cancellations, and 323 completions. Layoffs, discharges, out of state transfers as well as suspensions for military service or voluntary quits comprise the "suspensions and cancellations" category.

Under the apprenticeship program an individual is not trained to be a narrow specialist and therefore it is felt he will not be displaced by slight changes in technology or automation. An apprentice is trained in a work environment with the latest in machinery, tools, equipment and production methods. Upon completion of his training period the apprentice must be assured of a job as a journeyman. Thus although the Colorado apprenticeship program has never trained a large number of individuals, the program has nevertheless developed into a highly formalized method of combining an extensive on-the-job training program with classroom instruction in an attempt to meet the growing need for skilled craftsmen.

Table 18

Apprentices Registered With The Colorado Apprenticeship Council As Of December 31, 1965

Occupational Groups Classification	Number
Trade	
Construction	
Bricklayer, stonemason	62
Carpenter	177
Cement mason	11
Electrician	184
Floor coverer	32
Glazier	16
Lather	14
Painter-decorator	71
Plasterer	8
Plumber-pipefitter	275
Roofer	143
Ironworker erector	60
Sheet-metal worker	126
Sprinkler fitter	21
Tile & terrazzo worker	8
Printing	
Bookbinder, bindery worker	1
Compositor (printer)	53
Lithographer	2
Mailer	1
Photoengraver	4
Printing pressman	16
Stereotyper	4
Miscellaneous printing trades	1
Metal	
Automotive body builder-repairman	12
Automotive mechanic	17
Blacksmith	2
Boilermaker	21
Machinist	43
Molder-coremaker	6
Patternmaker & modelmaker	4
Ironworker fabricator	2
Tool-and-diemaker	13
Miscellaneous metal trades	12
Selected	
Butcher-meatcutter	31
Cabinetmaker	4
Carman	8
Electrical worker (light & power)	4
Lineman	35
Powerhouse electrician	2
Electrical worker (other)	57
Glazier-glassworker	7

Table 18 (continued)

Occupational Groups Classification	Number
Trade	
Selected (continued)	
Maintenance mechanic-repairman...	4
Millwright	28
Optical technician	1
Painter (except construction)....	9
Stationary engineer	11
Other	
Auto upholsterer	1
Barber	453
Cleaner & dyer	1
Florist gardener	4
Leather worker	8
Welder	13
	2,103

Number of Apprentices Registered By City

City or Headquarters	Number	City or Headquarters	Number
Boulder	33	Grand Junction	60
Center	1	Grand Lake	1
Climax	35	Greeley	22
Colorado Springs	163	Lamar	1
Cortez	1	Littleton	3
Craig	1	Manitou Springs	1
Delta	1	Meeker	1
Denver	824	Montrose	1
Derby	2	Ouray	1
Durango	2	Pueblo	156
Eagle	1	San Luis	1
Englewood	2	Springfield	1
Evergreen	2	Sterling	1
Fort Collins	9	Woodland Park	1
Golden	1		
			1,329
		Statewide Program	774
		Total	2,103

Metropolitan Youth Education Center

The Metropolitan Youth Education Center was organized in 1964 as a joint program of the Denver and Jefferson County schools. The Center provides basic and vocational education for high school dropouts. In addition, it offers guidance and counseling to help the dropouts solve their social, academic, and career problems.

The Center began classes in October, 1964 and now serves between 200 and 300 students, with one-third to one-half of these enrolled in the evening program. Financing is almost entirely from local funds provided by the school boards of Denver and Jefferson Counties.

Initially the program focused on helping the underemployed and unemployed high school dropout by providing training in vocational skills with basic academic courses offered only as a supplement. Since the inception of the Center, however, an important change of program direction has been made. Greater emphasis is now placed on basic academic courses and less on specific vocational training, even though the goal continues to be preparation for employment. Officials at the Center feel that the most basic vocational need of many students is obtaining the academic skills required for a high school diploma. They believe that nothing is more critical to vocational success than the ability to communicate well, accept responsibility, and have basic abilities in the use of English, mathematics, and social skills. This development reflects a growing demand on the part of both industry and students for a high school diploma or its equivalent. Many students come to the Center when they find that most employers require a minimum of a high school diploma for permanent employment.

The Center operates under a unique format and with a rather special student body. Each student's schedule is individually planned to allow for the kind of flexibility needed, for students enter the Center with poor study habits and a general dislike for school. If there is a common denominator in the student body it is that all the students are somewhat unstable and uncertain of the future of their education and employment. Otherwise there are wide variations in the intelligence and economic backgrounds of the students.

Courses are geared to meet the needs of each individual student for as long and as intensive a program as he desires. Enrollees may attend classes for as many hours of the day as they wish. Individual courses are not limited to quarter or semester programs but are continuous. Classes have a maximum of ten students. Students range in age from 16 to 26. The school maintains an open door policy for high school dropouts in the Denver-Jefferson County area; high school dropouts who leave the Center program can return whenever they desire.

Although the program allows for flexibility, there is a hard core of course offerings: English as a communication skill, mathematics, social studies, and vocational training in business skills, business machines, and auto work. The Center's English course is the most in demand. Courses in the social sciences include history, sociology, psychology, and world affairs. An attempt is made through the social science courses and throughout all aspects of the program to familiarize enrollees with the basic expectations they will encounter as citizens and future employees.

Due to limited facilities, vocational training courses have been limited to three general areas: business skills, business machine repair, and automotive work. Business training includes courses in bookkeeping, typing, and salesmanship. Training in business machine repair and automotive work are still in the developmental stage. The Center plans to expand its vocational offerings to include courses in welding, electronics, small engine repair, and service station tuneup.

The Center employs about 13 teachers, some of whom also teach in other public schools. Administrative expenses are paid on a 50-50 basis by the Denver and Jefferson County school districts. Instructional expenses are determined by the number of hours attended by students from each of the two counties.

The officials of the Center are proud of the statistics on job referrals, jobs filled, high school diplomas received, and GED certificates issued. The Colorado State Employment Service has played an important part in placing Center enrollees. Students are encouraged to continue in adult education by using the facilities of Opportunity School.

In general, those connected with the work of the Center feel it is performing a valuable service by providing basic education for dropouts. It is hoped that industry can be persuaded to cooperate by sponsoring on-the-job vocational training for many of the students who are studying basic education at the Center.

Manpower Development and Training Act

The federal Manpower Development and Training Act, signed by the President on March 15, 1962, established a nationwide program of free job training for the unemployed of all age groups through the combined facilities of state departments of employment and vocational education. The act's objective was to provide unemployed men and women with new skills, to upgrade their present skills, or to meet the needs of those persons displaced by automation, relocation of industry, and shifts in market demands. Thus the focus of the Manpower Development and Training Act is on meeting the growing problems of unemployment.

How Does the Act Work?

Financing. Since the inception of the MDTA program in Colorado, over $8 million has been spent on Manpower projects training over 4,000 men and women. Funds are provided for subsistence allowances of trainees as well as for the cost of the training. In 1965-66, two-thirds of the funds available went for subsistence and one-third for training.

Through fiscal year 1966, the Manpower Development and Training Act was 100 per cent federally funded. Beginning July 1, 1966, states were required to match 10 per cent of the cost.

Program Development. Each training program originates with the recognition by a local office of the State Department of Employment that a number of unemployed people in that region are interested in developing a particular skill. Consultations are had with a local advisory committee and tentative arrangements are made for providing facilities where the training could be conducted. Training classes are not usually started with fewer than 20 enrollees.

Once a proposed project is drawn up on paper, the proposal is forwarded to the Denver headquarters of the State Department of Employment where, in coordination with the Governor's Manpower Advisory Committee, it is reviewed and approved or disapproved. The proposal is also sent to the State Board for Vocational Education where a determination is made on the kind of training facility, length of program, and curriculum to be offered. At this point a budget request can be drawn up. If approval is given by the Manpower Advisory Committee and the State Department of Employment, the proposal is then sent to a regional MDTA office for final approval.

Once the project has been funded, the duties of the Department of Employment are to select and refer trainees, pay subsistence allowances and transportation to eligible trainees, and help trainees find employment when the training program is completed. The duties of the State Board for Vocational Education are to make all arrangements for training facilities and teaching personnel, organize the curricula, and determine the duration of training.

Eligibility. Several categories of unemployed are eligible for training under the act. Those qualifying are: youths 16 through 21, heads of families or households who have held jobs for at least two years in the past, a member of a family or household whose breadwinner is unemployed, and workers in farm families with less than $1,200 a year net family income. Part-time workers who are not adequately trained for full-time jobs are eligible but their priority for training is lower than that priority given the unemployed.

Program Offerings. There are three general categories of training under the Manpower Development and Training Act: vocational courses offered in private or public schools, on-the-job training, and a combination of schooling and on-the-job training. Courses are most often conducted in training facilities already established such as public and private schools and colleges or facilities provided by employers, labor organizations or other industrial groups cooperating in the on-the-job training program. In a limited number of cases the total facility is owned by, and operated solely for, the Manpower program. In other cases, existing facilities, in public schools for example, have been expanded to better meet the needs of a project. In such a case, the side benefit is the enlargement of the particular school's vocational program.

As was noted above, the length of a training program is determined by the State Board for Vocational Education. The programs differ in length, but no program can extend beyond 52 weeks except that up to 20 weeks of basic education can be provided if necessary. No person is placed in a training program of less than two weeks duration unless there are immediate employment opportunities in the occupation.

Financial Assistance to Trainees. Of the $8 million in Manpower funds spent in Colorado since December, 1962, nearly $5.5 million has been paid for the cost of training or subsistence allowances. Some of the conditions under which a trainee may receive such financial assistance are listed below:

> Unemployed heads of families or households who have held jobs for at least two years in the past, a member of a family or household whose breadwinner is unemployed, and workers in farm families with less than $1,200 a year net family income are eligible to receive a weekly training allowance equal to the average unemployment insurance benefit in Colorado up to 52 weeks.
>
> If the trainee lives in a household of three or more members, he is eligible to receive an additional allowance of $5 a week for the first four weeks of training, and $10 a week thereafter.

If the trainee lives in a household of two members or less, he is eligible to receive an additional allowance of $10 a week beginning with the 11th week of training.

Youths 17 through 21 years old are eligible to receive a training allowance of not more than $20 a week up to 52 weeks. Youths 16 years of age are eligible to enroll in training class but are not eligible for an allowance.

An individual taking training in a location not within commuting distance from his home is entitled to subsistence of $5 a day, not to exceed $35 a week, and transportation allowance to the class from his home and return when training is completed at a rate not to exceed 10 cents per mile.

Success in Job Placement. Response to the Manpower program has been favorable from enrollees, administrators of the program, and employers. A study made by the Colorado Department of Employment indicates that the placement average for Colorado is 74.5 per cent, slightly above the national average.

Economic Opportunity Act

The federal Economic Opportunity Act of 1964, better known as the War on Poverty, contains many programs that affect vocational training in Colorado, either directly or indirectly. These include the Job Corps, the Neighborhood Youth Corps, Community Action Programs, and adult basic education and work experience programs. Some projects are still in the developmental stage while others have terminated.

Job Corps, Title I-A

Title I-A of the Economic Opportunity Act states that:

> this part is to prepare for the responsibilities of citizenship and to increase the employability of young men and young women aged sixteen through twenty-one by providing them in rural and urban residential centers with education, vocational training, useful work experience, including work directed toward the conservation of natural resources, and other appropriate activities.

The program is for young people between 16 and 21; recruitment is conducted nationally. The Job Corps is 100 per cent federally financed and the states are not involved in the administration of the program.

Two Job Corps camps have been established in Colorado: one at Collbran and a second at Pagosa Springs. Both camps are rural types accommodating about 200 boys each. Colorado does not have a camp for girls or a camp in an urban center.

Generally, Colorado enrollees go to camps in other states rather than to those in Colorado, since one of the values of the camps is removing the boy or girl from his home environment. Some 200 Colorado youths are enrolled in the program.

Although all Job Corps camps offer a variety of vocational training and basic education facilities, each camp has a specialty. For example, those interested in forestry training enroll in the Pagosa Springs project while those wanting to pursue a conservation program enroll in the Collbran program. In some cases private industries have set up facilities in camps to provide vocational skills; examples are Westinghouse, Ford Motor Company, and Burroughs. Often after completion of a program in, for example, auto fender work using the camp facilities of Ford Motor Company, an enrollee will leave the Job Corps camp for a job with Ford Motors.

Most enrollees participate in a basic education program in addition to receiving vocational training. The enrollee usually spends six hours in a basic education class for every four hours he is learning a vocational skill. The total time spent in a Job Corps camp depends upon the training the enrollee wishes to pursue. The program may be as short as six months or as long as two years.

Neighborhood Youth Corps -- Work Training Programs for Youth, Title I-B

Title I-B of the Economic Opportunity Act seeks to "provide useful work experience opportunities for unemployed young men and young women ... so that their employability may be increased or their education resumed or continued..." The title provides for full or part-time work experience and training for youths 16 through 21 years of age. Although not specifically stated in the law, two programs have been developed under Title I-B: an in-school work program and an out-of-school work program for those who have either dropped out of school or have graduated but who still need help in becoming employable. Both are commonly called Neighborhood Youth Corps programs.

General limitations are placed on the organization of both in-school and out-of-school training programs: 1) enrollees are to be employed only on publicly owned facilities or projects sponsored by private nonprofit organizations; 2) work experience must be in skills in which there appear to be a reasonable expectation of employment; 3) the program must not result in the displacement of employed workers or impair existing contracts for services; and 4) to the maximum extent feasible, the program should be coordinated with vocational training and educational services adapted to the special needs of enrollees.

Eligibility for participation is determined according to a schedule based on family income and size of family. Only those meeting the "need" criteria are eligible.

Work training programs are 90 per cent federally financed. The 10 per cent non-federal funds are in most instances provided by in-kind services such as supervision, materials and equipment, and transportation.

In-School Work Programs. Administered by the United States Labor Department through the various contracting state and local agencies and private non-profit organizations, the in-school work program emphasizes less the cultivation of a specific vocational skill than the development of positive job attitudes. Thus at the same time job training is provided at $1.25 an hour, an incentive is developed for youths to stay in school and plan for future employability. In most instances the students enrolled are under-achievers academically, potential dropouts, and come from families that are economically underprivileged.

Colorado's first in-school programs were initiated in the spring of 1965. The largest contracting agency was the State Department of Education, which handled the program for 33 school districts having 1,420 enrollees and federal grants amounting to $189,195.

A list of 37 job titles was drawn up by the Department of Education to serve as a suggested guide for project administrators in the local districts. Included among the job suggestions were: athletic assistant aide, audio-visual assistants, book-repairer helper, cashier, janitor helper, kitchen helper, mail clerk, office boy, landscape gardener aide, telephone operator, and porter. Most of these jobs were in the schools. Some emphasized skills that would be of immediate value in securing employment directly out of high school: typist, maintenance assistance aide, file clerk, and business assistant. In some areas, data processing and auto repair were included on the list. In general, however, training adaptable to future employability was limited.

The number of hours a boy or girl was allowed to participate in the in-school work program was limited because enrollees were expected to devote most of their time to school studies. The spring program for 1965 allowed 15 hours of work per week while the summer program provided a maximum of 32 hours per week of work.

During the summer of 1965 a variety of agencies and organizations participated in the summer in-school training program. Again the largest contract was made by the Department of Education. Forty-five school districts were involved serving 1,517 students with a total expenditure of about $525,000. Other contracting agencies included the Children's Educational Fund, the Denver War on Poverty, the Denver school board, and the Huerfano County Commissioners.

The program has continued on a similar basis for the 1965-66 school year and the summer of 1966 with the State Department of Education still the largest contractor. Other agencies include the Children's Educational Fund and the Runyon Field Committee in Pueblo.

Reaction to the in-school training projects from school administrators and citizens of local communities has been favorable. Of prime importance is the comment of school administrators and counselors that a sense of responsibility, greater interest in school work and an over-all maturing have often been the results for student participants. In some cases, the in-school training program has drawn former dropouts back into school. Citizen reaction to the program has also been favorable.

Out-of-School Work Training Programs. The out-of-school Neighborhood Youth Corps is providing job training programs similar to those under the in-school projects. To date, the most extensive out-of-school project in Colorado is the Denver project, a description of which serves to show the kind of activity going on throughout the state.

Generally, the Denver out-of-school project deals with children from families whose income falls between $3,000 and $4,000. Youths enrolling in the program are high school dropouts or graduates who are unemployed or under-employed, or high school students displaying poor achievement or contemplating leaving school.

In addition to work-training programs, enrollees receive counseling, educational testing, loans and scholarships, job referrals, and guidance in ethnic and cultural problems. Once an out-of-school youth is accepted, he is put to work at one of the city, state or nonprofit agencies taking part in the program. The work load for each enrollee is not to exceed 32 hours per week. There is a minimum of six to eight hours per week devoted to counseling and schooling. Youths take part in one or more of six classes offered in basic education, mathematics, remedial reading, beginning typing, advanced typing and shorthand, charm and speech.

An examination of the work classifications indicates that the out-of-school training program is similar to the in-school program. A random sample of the training available for the Denver program shows that a number of jobs are available as clerical aides, building and grounds maintenance workers, child care assistants, and garden aides.

Parochial School Programs. Programs are conducted for students in parochial as well as public school students under both the in-school and out-of-school Neighborhood Youth Corps programs. In Denver, the Children's Educational Fund has been the coordinating body for federal allocations to parochial schools, although the Fund has directed programs for a large number of public school youths as well.

Typical of the programs administered by the Children's Educational Fund was one conducted in early 1965 as an in-school work program with a federal grant of $60,820. The program involved 235 students from Denver's parochial schools. Students worked a maximum of 10 hours per week at $1.25 per hour on maintenance and clerical jobs similar to those described under the in-school programs administered in the public schools.

Adult Basic Education Programs, Title II-B

Administered at the state level by the Department of Education and its Division of Education Beyond the High School, this program is directed toward individuals eighteen or over whose "inability to read and write the English language constitutes a substantial impairment of their ability to get or retain employment commensurate with their real ability..." The title is directed toward "improving their ability to benefit from occupational training and otherwise increasing their opportunities for more productive and profitable employment..."

Although not specifically provided for in the law, a cooperative effort in dealing with problems in education and employment has been undertaken by the State Departments of Welfare and Education in the administration of Titles II-B and V. Essentially, each of these titles has the same objective, improving an individual's employability. In administering Title V, the Department of Welfare found that before constructive work experience opportunities for individuals eighteen or over could be expanded, many enrollees first needed a basic education training course. It was felt that since much of the education to be provided under Title V projects tied in directly with the basic education programs for adults for which money was available under Title II-B, arrangements should be made to share responsibilities and costs of local adult basic education classes. Such a cooperative agreement has been made in Colorado.

The program's short range goal is to deal with the problem of lack of education in the most educationally and economically poor areas of the state where it is reported that adult illiteracy is as high as 25 per cent. The primary long range objective is to raise to self sufficiency those persons whose educational level has been limited to less than an eighth grade level of reading and comprehension.

Instructional programs are implemented in the local areas by local educational agencies under contract with the State Department of Education. Participants in the Title V programs make up about half of the enrollees in the Title II-B classes. Classes of instruction include reading, writing, basic arithmetic, health information and home and family living. An enrollee spends about 10 hours per week in class but the hours spent in the classroom and the duration of the program depend on the educational level of the group of enrollees. The goal is to raise the individual's educational level to that equivalent to at least an elementary school completion level.

The budget for Title II-B projects for fiscal year 1966 was $183,552. About 2,000 adults were provided training in basic education. Funding of all projects is on a 90-10 basis with 90 per cent of the funds from the federal government.

Work Experience Programs, Title V

Administered through the U. S. Department of Health, Education, and Welfare, Title V proposes to "expand the opportunities for constructive work experience and other needed training available to persons who are unable to support or care for themselves or their families." The focus of programs under this title has thus been directed, like Title II-B, toward improving the capabilities of citizens age 21-45 who are unemployed. While Title II-B seeks to improve one's ability to read and comprehend at an eighth grade level, Title V proposes not only to provide this basic level of education but at the same time afford the individual work experience.

Title V projects are 100 per cent federally funded. There is no time limit set on basic education or work experience programs.

Even though Title V is administered by state and local departments of welfare, there is a cooperative effort with the State Department of Education in its direction of adult basic education programs under Title II-B. In another cooperative effort, the Economic Opportunity Act states that the administrators of Title V "shall make maximum use of the programs available under the Manpower Development and Training Act of 1962, as amended, and Vocational Education Act of 1963." Thus while the title is administered by departments of welfare, there are close links with other departments and other programs.

Title V includes jobs for clerical and stenographic workers, library aides, food service workers, homemaker aides, nurse aides, IBM key punch operators, laundry and dry cleaning workers, and bookkeepers; heavy equipment operators and maintenance men; automotive mechanics, electricians, masons, carpenters, painters, and construction workers; orderlies, building and grounds maintenance men, public utility workers, printers, dairymen, and farmers. Training sites are being utilized to provide specific training in the fields of drafting and surveying, police and probation work, practical nursing, and recreation.

Following the guidelines of the Title V provisions, the Denver project, for example, combines a program of basic education with work experience in public facilities or private enterprises. The recruitment for the initial program came from the general assistance rolls of the Denver Welfare Department. When administrators of the Title V program feel that an enrollee has the potential for a Manpower Development and Training Act program or Opportunity School or a private vocational school, Title V moneys are used, when necessary, to finance such a training program.

Each enrollee in Title V is paid in accordance with the State Welfare Plan of Assistance according to the size of his family. The money is distributed by the county, although as previously stated, these are federal funds.

Administration of the Act

The Economic Opportunity Act established an Office of Economic Opportunity in the Executive Office of the President. Although primary emphasis has been given to local initiative and administration of projects through the Community Action Programs of Title II, state governments as well as local and federal agencies play an important part in program administration and coordination. At the state level, the Colorado Office of Economic Opportunity in the Office of the Governor also plays an important part in the administration of the act.

The Colorado Office of Economic Opportunity was established by the governor to assist him in his responsibilities under the Economic Opportunity Act. The primary functions of the state Office of Economic Opportunity are to: (1) coordinate state and local efforts in the development of local programs so that a duplication of efforts is avoided; (2) provide, in accordance with the Economic Opportunity Act, "technical assistance to communities in developing, conducting, and administering community action programs..." (thus, for example, if a community in the San Luis Valley is interested in developing a program under this Act, it is the function of the Colorado Office of Economic Opportunity to provide the basic information to implement the project); (3) assist the governor in evaluating programs under Titles I and II which have been approved by the federal government and are awaiting approval of the state executive; and (4) assist the federal government in evaluating projects that have been in operation in Colorado as a means of determining whether contract provisions have been upheld.

The responsibilities of the governor under the Economic Opportunity Act are outlined in Sections 209 and 603 of the act.

Section 209 (c) states that:

> In carrying out the provisions of Title I and Title II of this Act, no contract, agreement, grant, loan, or other assistance shall be made with, or provided to, any state or local public agency or any private institution or organization for the purpose of carrying out any program, project, or other activity within a State unless a plan setting forth such proposed contract, agreement, grant, loan, or other assistance has been submitted to the governor of the state, and such plan has not been disapproved by him within thirty days of such submission.

Thus under Title I-A, the governor has the power to veto the proposed location of a Job Corps camp in the state. He does not have authority, however, to rule upon the kind of program conducted at the camp once it is established. The governor also has approval authority over all work-training programs under Title I-B. He does not have authority over I-C -- work-study programs -- as specified in Section 209 (c): "...this section shall not apply to contracts, agreements, grants, loans, or other assistance to any institution of higher education in existence on the date of the approval of this act."

Summary of Committee Meetings

The committee has held nine meetings since June, 1965. Committee members have heard from a number of different persons interested in vocational education and have participated in several discussion sessions centering on possible solutions to vocational education problems. At one meeting the committee toured vocational education facilities in Boulder, Jefferson County, and at Emily Griffith Opportunity School.

Below is a summary of the testimony given by persons who appeared before the committee.

Mr. Herrick Roth, Colorado Labor Council

Mr. Roth commented on the need for improvement in vocational education in Colorado. Although it has made some worthwhile contributions, in many ways it is haphazard, out-of-date, inadequate, and poorly coordinated. For example, there should be more emphasis on over-all job fundamentals as well as job specifics. On-job-training should be encouraged whenever possible, for this is often where a person receives his best training. Recognition should be given to the fact that for many persons, training in basic literacy must precede training in job skills if the job training is to be successful (as illustrated with the adult trainees at the Job Opportunity Center). Also, more attention should be given to training for the semi-skilled service jobs as well as the more highly skilled occupations.

There is much more to vocational education than the five subject areas in the public school program, Mr. Roth said. The public schools do not and probably cannot serve all vocational education needs. In fact, where dropouts and minority groups are concerned, vocational training may be more effective in an entirely different institutional environment.

There is need for more occupational training programs to help alleviate unemployment problems in the major population centers of the state, Mr. Roth continued. Even Opportunity School is inadequate to serve the needs of the Denver area, he said. Opportunity School actually provides effective vocational training for only about 250 persons at any one time, since the primary emphasis is on adult education rather than true vocational education.

Mr. Roth concluded that a new approach is needed, one involving an interlocking system of public schools, vocational education, and higher education. Money, talent, and other resources need to be organized and coordinated through a single vocational education authority -- either the present State Board for Vocational Education or a successor to it. Mr. Roth expressed his hope that Senate Bill 241, adopted by the General Assembly in 1965, will help bring the state closer to this goal.

Mr. Basil Allen, Boulder Valley Schools

Mr. Allen stated that there are many ways in which local leadership can assist in vocational education problems. In Boulder, for example, the local board of education is building a separate facility for vocational education. A number of interested students from each high school are transported to the vocational-technical center for half of the school day.

At the present time the center is primarily for high school students in grades 11 and 12. In addition, some students remain in the program after graduation from high school. The offerings are now limited to trades and industries but when the entire facility is completed it will serve both boys and girls in all vocational areas.

One of the attractive features of the Boulder program is the fact that a student can maintain an identity with his own high school and graduate from it. Another feature is that all of the high schools except one are within a few minutes' driving time from the vocational center and students can be shuttled by bus to and from the center. They are not allowed to drive their own cars.

The Boulder center provides courses in automotives, electronics, welding and metal fabrications, and machine shop. Vocational enrichment programs are still maintained in each high school for those who are not studying at the center for a full half-day.

This program has received wide community support in Boulder, Mr. Allen said. This is due in part to the high caliber of individuals who initially supported the venture.

(In June of 1966 the committee visited the Boulder center, which is now designated as an area vocational school for the Boulder and Longmont school districts. By meeting the requirements for an area vocational school the center has become eligible for federal construction funds on a 50-50 matching basis. The existing plant was built at a total cost (federal and local) of $300,000. A $700,000 addition is under way. Local funds are provided by a one-mill levy in the Boulder district which raises about $145,000 per year.)

Mr. Lawrence Meier, Jefferson County Schools

Mr. Meier noted that the Jefferson County philosophy of vocational education concentrates on introductory and exploratory vocational courses in the comprehensive high school without a central vocational education facility. The concern of Jefferson County has been to remain flexible and relatively unspecialized in vocational programs so as to meet the changing needs of society.

Junior high and high school programs in Jefferson County do not involve half-day blocks of time set aside for vocational training. Vocational courses occupy only one class period, the same as mathematics or history. Terminal vocational training is not attempted at the high school level, but is to be obtained after graduation. The hope is that there will be one or more community junior colleges established in or near Jefferson County to provide post-secondary vocational training.

The Jefferson County program begins in the eighth grade with a mandatory course for all boys covering a range of vocational areas, including visual communications, terminology, plastics, power mechanics, and general metals. It is felt that this mandatory program helps to broaden the perspective of each student. The subjects covered are chosen because they represent the most up-to-date areas of concern in vocational education.

To carry the program to all the junior high schools in the district, mobile homes have been purchased and equipped, each for a different subject matter area. After a subject is completed at one school, the mobile classroom and the teacher are transported to the next school and a new mobile classroom equipped for a different subject arrives. This rotation system saves on personnel and equipment costs.

The junior high program carries out the philosophy that vocational education in the public schools should be of an exploratory nature only. It is believed that this approach will lead to a lower dropout rate, especially in grades 8 and 9, Mr. Meier said.

The program has not yet been extended into the high school, but the plan is to offer pre-vocational type courses as electives each year without attempting to specialize until the twelfth grade, when there might be a limited amount of specialization.

Mr. Meier said that the Jefferson County philosophy has been a subject of controversy, but he is convinced that the interests of both the student and the future employer are best served by giving students a solid general background in the high school to be followed by a more specialized program in grades 13 and 14. He cited a study from Massachusetts Institute of Technology which supports this view.

Mr. Russell Britton, Denver Public Schools

Mr. Britton reported to the committee on Emily Griffith Opportunity School, which has been in operation for 50 years. Ninety per cent of the school's work is concentrated on helping people prepare themselves for new job opportunities, he said. The other 10 per cent involves hobby courses.

Opportunity School serves about 1,000 to 1,200 Denver high school students who are enrolled at their home high schools and attend Opportunity School for some of their courses. This is a small proportion of the total registrations at Opportunity School, however. Most of the persons attending Opportunity School are adults. Nearly half of the students are between 18 and 35.

Mr. Britton reported that in the course of a year there are about 27,000 registrants at Opportunity School. This is not the number of persons attending the school at any one time, since many courses last for short periods and some persons take more than one course. An estimated 2,800 are usually registered at any one time, Mr. Britton said. About 3,400 are on the waiting list.

Opportunity School is operated by the Denver Public Schools and serves primarily those persons who live within the city limits of Denver. People from outside Denver may enroll in any class, but only if there are no others within Denver who want to take the class. Non-residents must pay tuition.

Vice Chairman Romer asked Mr. Britton to comment on three essential differences between the organization of Opportunity School and other post high school institutions offering vocational training; (1) if Opportunity School were organized as a junior college it would be receiving $500 per student from state sources, whereas now it is supported almost entirely by Denver: (2) Opportunity School is not offering transferable credits and is not accredited, whereas junior colleges and colleges usually are; and (3) Opportunity School has a broader age range including more older students than other types of schools.

Mr. Britton said that Opportunity School does not quarrel with the concepts of education followed in other schools but it is not interested in changing its concepts to conform with them. The value of Opportunity School lies in its close contact with practitioners and its flexibility to change with the needs of the market, he said. The format of the junior college, where accreditation standards and other strict regulations are involved, is not flexible enough.

Chairman Gebhardt asked for an estimate of the additional facilities needed and the number of students who would enroll if the school could be expanded to serve all who wanted to attend. Mr. Britton could not make such an estimate but he noted that new buildings and equipment are needed at the present time, even without expanding the area served.

Mr. Britton also called the committee's attention to the Metropolitan Youth Education Center, a joint project of Denver and Jefferson County, which is designed to assist students who have dropped out of school. Vocational training is included in the program, he reported.

President Victor Hopper, Dean Leland Benz, and Dean Leonard Smith, Southern Colorado State College

Officials from Southern Colorado State College in Pueblo were asked to report on the current status of the vocational education program of S.C.S.C. now that it is a four-year college. President Hopper reported that the trade-technical division of the school has been strengthened in the transition from a junior to a senior college. Today 13 to 15 per cent of the student enrollment is in the trade-technical division. The rate of growth in this division is the highest in the college. Over-all enrollment for 1965-66 represented a 31 per cent increase while the trade-technical division enrollment represented an increase of 35 per cent.

S.C.S.C. nas an advisory committee which keeps the college abreast of new employment needs which affect the trade-technical program. The majority of the members of the advisory committee are from local area industry with a few representatives from outside the Pueblo area.

President Hopper reported that S.C.S.C. students majoring in one division must take courses in other divisions. The trade-technical division is not a dumping ground for poor students, he said.

The granting of credits for trade-technical courses is determined by the college. There are different levels of credit; some count toward a baccalaureate degree and some toward an associate in applied science degree. Under certain programs in the night division a high school diploma is not needed for entrance, but in this case college credit is not given.

In many of the Manpower Development and Training Act programs conducted at the college under federal sponsorship, courses are shorter than the regular college courses -- 12 weeks or less in length. S.C.S.C. is also working with the Pueblo Job Opportunity Center. These programs are conducted under contractual arrangements and are not part of the college program.

Dean Benz presented some general information concerning organized occupational curriculums in higher education. An increasing amount of attention is being given to such courses in various types of institutions. The need has been met in part by junior colleges, technical institutes and similar institutions, but in a good many instances, curriculums of less than baccalaureate level have also been offered by four-year institutions, he said. Nationwide, over 500 four-year institutions offer organized occupational curriculums of less than four years in length, and nearly 1500 offer technical preparatory programs.

The number of institutions of higher learning offering technician training curriculums is much greater than the number of programs referred to as "trade and craftsman or clerical" level training programs, Dean Benz continued. Technical programs are increasing much more rapidly than the non-engineering related curriculums.

Mr. Fred Betz and Mr. Al Bunger, State Board for Vocational Education

The committee asked Mr. Betz and Mr. Bunger for background information on the responsibilities and activities of the State Board for Vocational Education. Mr. Bunger described in some detail the work of the State Board, its budget and staff, and its advisory committees.

By the end of September, 1965, the new advisory council to the State Board had not yet been activated to carry out the directives of Senate Bill 241 enacted during the 1965 legislative session. The committee asked why the advisory council had not yet begun its work. Vacancies on the State Board itself were the reason for the delay, Mr. Bunger said.

In discussing the $3.9 million in federal funds available for Colorado in 1965-66 under the Manpower Development and Training Act, Mr. Bunger was critical of the fact that only $1.0 million of this amount is used for actual training while $2.9 million goes for subsistence allowances for the trainees. The high subsistence allowances in some cases enable individuals to receive more while in training than they will be able to make when they go to work, he said.

Mr. Betz reported that the State Board for Vocational Education has been promoting the development of area vocational schools around the state. The concept is gaining momentum and the State Board plans to employ a field staff to help coordinate the establishment of such schools. Mr. Betz feels that the area concept of vocational training has great potential for Colorado.

Chairman Gebhardt asked about the reported rift between the State Board of Education and the State Board for Vocational Education. Mr. Betz expressed the feeling that this had been settled when the General Assembly affirmed its confidence in the State Board for Vocational Education by passing a new vocational education law retaining separate boards. Mr. Bunger said that if there is still a rift it is at the state level only.

Mr. Shelby Harper, Commission on Higher Education

At a joint meeting with the Committee on Education Beyond High School near the end of 1965, the committee asked for a progress report from the Commission on Higher Education. Mr. Harper noted that the seven members of the Commission had been appointed by the Governor in late June. A nine-member advisory committee was also appointed, including four legislators and five representatives of the existing higher education governing boards.

The first few months of the Commission's existence were spent familiarizing Commission members with the existing facilities and administrative personnel at each institution of higher learning.

Visits were made to all the campuses, including the junior college campuses.

At the present time, Mr. Harper said, the Commission is involved in the budget process in preparation for the 1966 General Assembly. Other priority items include consideration of: (1) the situation in the Denver metropolitan area, including development of a workable plan covering the University of Colorado Denver Center, Metropolitan State College, and plans for vocational-technical education; (2) the junior college picture, including the question of where they fit into the total statewide program of higher education and clarification of the purposes and goals of junior colleges; and (3) review of the "blueprint" prepared by the Association of State Institutions of Higher Education in December, 1964.

Mr. Harper stated that the Commission considers its role to be that of bringing proposals, alternatives, and background material to the General Assembly to facilitate legislative decisions.

Commenting that technical-vocational education is one of the real areas of concern to the Commission, Mr. Harper said that the Commission plans to work with the State Board for Vocational Education in this phase of its study. The junior college question will be closely related to the discussion of vocational education. Mr. Harper stated his personal opinion in favor of a state system of junior colleges. He feels that local initiative and control of junior colleges has proved inadequate to meet the needs of the state.

The staff of the Commission will include an executive director and two other professional staff persons along with two on the clerical staff. Outside consultants will be used from time to time.

Dr. Fred Bremer and Dr. Leland Luchsinger, Division of Education Beyond the High School, State Department of Education

Dr. Bremer, junior college consultant, presented information on the nation's junior college movement and its meaning for Colorado. Although only a handful of two-year colleges existed anywhere in the world in 1900, there are now in this country 780 such institutions with an enrollment of 1,150,000 students. Enrollments in the junior colleges are increasing at a more rapid rate than in the four-year institutions. One out of every four of those who go to college enroll in a junior college.

The typical community junior college assumes the responsibility for serving four areas in the educational process: transfer education, terminal education, adult education, and community services. Another, and possibly fifth, function is guidance.

In Colorado, the figures show that the existence of a junior college in an area tends to stimulate college attendance. Also, junior colleges perform a valuable function in providing the first two years of a degree program for those who cannot afford to leave home to go to college, those who need individualized instruction, and those who may be late comers.

The junior colleges have a responsibility for providing vocational and technical training to supply technicians and skilled manpower. In Colorado, junior colleges need to put more emphasis on such programs, Dr. Bremer said. At present Trinidad has the most comprehensive offerings in the vocational-technical field. Other junior colleges are starting to improve vocational facilities, however.

In Colorado about 22 per cent of the junior college students are taking terminal vocational-technical courses. The national figure is 32 per cent, Dr. Bremer said. Dr. Luchsinger added that nationally, about two-thirds of the students entering junior colleges expect to complete a four-year degree but in actuality only one-third go on to four-year institutions. The other two-thirds end with two years of junior college or less.

Dr. Luchsinger emphasized that one of the values of the junior college is the diversity of curriculum which permits students to change their educational objectives while remaining within the same institution. Because of this the attrition rate in the junior college is lower than in four-year institutions.

The State Department of Education has an accreditation system for junior colleges. If a school is accredited, it is accredited as a whole and not by individual programs. Neither financial assistance nor transferability of credits is dependent on accreditation.

In Colorado, junior colleges are by statute a part of the public school system and consequently are under the jurisdiction of the State Board of Education. The Board cannot exercise control over local programs, however -- only leadership, Dr. Luchsinger said.

Dr. Luchsinger said that the junior college is a separate entity rather than the 13th and 14th grades of the high school because, even though it is part of the public school system, it has a different objective from the high school and needs to be a separate unit with an adequate financial base, an adequate number of students, and the legal power to tax and build.

In response to suggestions that the traditional concepts of local initiative and local control are not adequate to meet the needs in the Denver metropolitan area, Dr. Bremer noted that there are many urban areas with sizable populations in other parts of the country which have multi-campus junior colleges serving large enrollments and operating under the traditional community college concept. Dr. Luchsinger emphasized the fact that the present junior college organization law provides only for local initiative in areas meeting the prescribed financial and student base. He said that other factors or other methods of organization could be written into the law, but until this is done the concept of local initiative prevails.

Dr. M. G. Linson, State Board for Vocational Education

At the first meeting following the 1966 session of the General Assembly the committee invited Dr. M. G. Linson, Mr. A. R. Bunger's successor as Director of the State Board for Vocational Education, to make a progress report on the State Board's activities.

Dr. Linson stated that the purpose of vocational education is to offer vocational or technical training below the baccalaureate degree level, designed to prepare persons for employment. He noted that although there may be widespread agreement on the definition, there are widely different interpretations of how best to train persons in vocational skills.

The difference between vocational training and technical training can be shown graphically. As one progresses from the unskilled to the professional occupations, the amount of "know-why" (theory) increases and the amount of "know-how" (mechanical ability) decreases.

Dr. Linson reported that present high school vocational programs, exclusive of homemaking, are serving only slightly over six per cent of the state's high school students. Twenty counties offer little or no vocational education and that which they do offer has little wage-earning potential. Thus, one-half of our graduating high school students enter the labor force immediately after high school with only a small percentage of them having the kind of training that adequately prepares them for employment.

One of the principal reasons for the inadequacy of programs is lack of funds. The state appropriates very little in earmarked funds for vocational education. Instead, vocational education has to compete with general education at the local level for a share of the general state aid which the district receives. Since vocational education costs are high, there are fewer vocational programs, Dr. Linson said.

In Colorado, the state provides less than half the amount of the federal allotment for vocational education, whereas nationally the states provide twice the federal amount, Dr. Linson continued. He said that many general educators desire only exploratory vocational programs and they have hesitated to put money into the stronger and more comprehensive programs advocated by vocational educators.

Dr. Linson pointed out that vocational education includes not only high school programs but also programs at the post-secondary and adult levels. Preparation for skilled and semi-skilled jobs should be begun in high school and can be continued after high school if necessary. At the present time, however, too many high schools refuse to offer adequate vocational courses and the junior colleges do not offer adequate training for jobs below the technical level.

Additional high school vocational programs would be in lieu of some of the general education courses, but this would not mean that vocational students would not be knowledgeable in math and science. Vocational programs as well as academic programs stress the development of thinking abilities. A recent study by the American Institute of Research contradicts the contention that vocational education students are less intelligent or less responsible citizens than those with strictly academic backgrounds, Dr. Linson reported. Furthermore, those with vocational training tend to find jobs sooner after graduation.

Dr. Linson was asked to discuss the State Board's area vocational school concept. He said the State Board believes the development of area schools is the most practical approach to vocational education problems under existing circumstances. The area school can serve the vocational needs of a number of small schools which could not provide the facilities on their own. The development of area schools can also avoid conflicts with junior colleges over who can best administer a vocational education program. Currently an average of only 17 per cent of the junior college curriculum is devoted to vocational education, Dr. Linson noted.

Asked for his comments on what the state should be doing in terms of leadership, coordination, and finance in order to have a good over-all program of vocational education, Dr. Linson noted that several problems will have to be solved. There should be a matching of training and employment opportunities in the state. People should be educated to what vocational education is and what it can do, in an attempt to break down a negative attitude toward the subject. Several tools could be provided by the state to help: more money could be earmarked for vocational education; part of the money for junior colleges could perhaps be withheld until the schools demonstrated that they were providing vocational programs tailored to meet employment needs; and attempts could be made to coordinate vocational programs.

The State Board for Vocational Education is trying to find ways of educating parents and counseling personnel to encourage children to enroll in vocational programs. Additional vocational guidance personnel are needed, Dr. Linson said.

The State Board for Vocational Education would be willing to see more specific vocational guidelines and more specific vocational aid developed by the General Assembly, Dr. Linson stated. He also noted that under ideal circumstances the state (or a five-state area) should develop a curriculum laboratory to show school districts different approaches to the teaching of vocational education.

Mr. Xen Hosler, State Board for Vocational Education

Mr. Hosler is employed by the State Board for the purpose of promoting the establishment of area vocational schools around the state. He reported on the status of the area school projects.

The impetus for the area school concept came from the federal Vocational Education Act of 1963, which permitted states to use part of the new federal aid for construction of such schools.

Mr. Hosler estimated that it would cost about $20 million to build area schools in Colorado to serve approximately 5400 students. About $500,000 per year from federal sources can be used for this purpose. Currently there are a number of areas in the state interested in establishing area schools. The State Board has tentatively divided the state into 14 areas for the establishment of area schools.

Mr. Hosler said that state aid may be necessary to finance the operation as well as the construction of area schools. Aid could be allocated on the basis of students enrolled or hours of instruction. Another possibility for area school financing would be to grant tax levying authority to boards of cooperative services for the purpose of running area vocational school programs.

Area schools would serve all age groups and would be open to high school students, dropouts, and full and part-time post-secondary students and adults. The schools can operate as part of a junior college or as a separate entity governed by a board of cooperative services. In areas of the state where it would be difficult to transport high school students to a single area school, facilities would be set up at different locations within the area, each facility specializing in a different aspect of the curriculum. In every case, area school programs would be tied to current needs through advisory committees.

Even with the development of area schools, vocational programs in individual high schools and in junior colleges should continue to expand, Dr. Linson said. All vocational programs at all levels need to be increased. The area vocational schools would not relieve the responsibility of other institutions in vocational education.

In answer to a question regarding where to concentrate state efforts in vocational education since there is not an unending amount of money available, Dr. Linson said that in some cases emphasis should be given to the area school approach while in other cases comprehensive programs in the high schools and junior colleges should receive priority. Specific cases have to be considered in relation to the needs and resources of each community. It is not possible to point to an either/or solution which would be applicable to the state as a whole.

So far the area school approach through boards of cooperative services has not been accepted in the Denver metropolitan area. Some of the school districts in the area were contacted but they decided against joining in the area school effort.

Preliminary Report from Advisory Council

The advisory council to the State Board for Vocational Education became active during the spring and summer of 1966 and the committee asked for a progress report in August. The progress report presented at the August meeting was fairly comprehensive and contained preliminary recommendations involving the following:

(1) Money for the development and dissemination of information concerning the need and value of vocational education;

(2) Emphasis on vocational education philosophy for administrators;

(3) Efforts by labor and management to inform the public of employment opportunities for persons without baccalaureate degrees;

(4) Provisions for work experience for guidance counselors;

(5) Emphasis on vocational education philosophy for counselors;

(6) Money for salaries of 10 to 15 vocational guidance field men on the staff of the State Board for Vocational Education;

(7) Employment projections to be prepared by the Department of Employment;

(8) Current employment information to be disseminated by the Department of Employment;

(9) Availability of vocational education courses to all high school students, with greatly increased state appropriations to accomplish this purpose;

(10) Development of more vocationally oriented elementary curricular patterns and materials, and money to employ a vocational curriculum specialist at the state level;

(11) Prevocational courses and occupational guidance at the junior high level, with state reimbursement;

(12) A study of the number of area vocational schools needed, the most desirable locations, and the priority in allocating state funds;

(13) Readjustment of the present system of allocating funds to junior colleges in order to place more emphasis on vocational-technical offerings;

(14) Increased state reimbursement for all vocational education offerings;

(15) Retention of the State Board for Vocational Education as the administrative agency for vocational education in Colorado, with state funding of staff personnel for the advisory council;

(16) Periodic joint meetings of the State Board for Vocational Education, the State Board of Education, and the Commission on Higher Education; and

(17) Stronger state influence toward coordinating all programs providing vocational training.

Letter From State Board for Vocational Education

The committee solicited written comments from the State Board for Vocational Education on several vocational education questions. The Board's reply was presented at the August meeting.

One of the questions was concerned with the possibility of establishing three to five separate state-built, state-operated vocational centers. The State Board for Vocational Education stated its feeling that such schools would be acceptable only if they in no way detracted from maximum development of vocational programs in the comprehensive high schools, the area vocational schools, the junior colleges, and the four-year colleges and universities. The Board reaffirmed its commitment to the development of area vocational schools established through local initiative to fit local situations.

Another question concerned the Board's reasons for opposing a merger with the State Board of Education. The State Board for Vocational Education said that the philosophies of the two boards are very much opposed, that a separate representative board can best promote the interests and high standards of vocational education, that the general educators lack appreciation for the values of vocational education, and that general aid to schools (without earmarking for vocational purposes) will not lead to improvements in vocational education.

The committee asked for suggestions for ways of promoting coordination and cooperation between the State Board for Vocational Education and the State Board of Education under the present structure. The State Board for Vocational Education recommended periodic joint meetings of the two boards, periodic joint meetings of the two staffs, having State Department of Education staff members serve in a consultative role in development of vocational policies, having one or more members of the State Board of Education attend each meeting of the State Board for Vocational Education, and sharing Title V ESEA funds between the two departments rather than limiting them to the State Department of Education.

The committee also asked for suggestions for improving coordination among all the various vocational education programs. The State Board described the present machinery for coordination, including liaison with the Manpower Advisory Council, the Advisory Committee for the Office of Economic Opportunity, the Employment Service, and the Apprenticeship Council. The Board stated that a more formal means of coordination may be needed and suggested that an organizational pattern should be established for this purpose.

Letter From State Board of Education

The committee asked the State Board of Education to submit written comments on the junior college question, the proposal to abolish the separate board for vocational education, and the possibility of establishing vocational centers under state sponsorship.

The State Board of Education prefaced its reply with the statement that its primary function is to assure that the children of Colorado are provided educational opportunities and experiences in the public schools which will allow each individual the opportunity to achieve his maximum potential. Emphasizing that the general goals of our educational system reach far beyond the traditional concepts of skill development, the Board stated its belief that all public school education, including vocational education, should be under the supervision of the State Board of Education.

The Board believes that some type of post-high school education including a 13th and 14th year should be almost universally available to every pupil in the state and that consequently junior colleges should be supervised by the State Board of Education. The Board is not unalterably opposed to transferring this function to some other agency, however, if the transfer enabled the junior college to fulfill its unique function adequately.

The Board feels that the State Board for Vocational Education should be designated as merely advisory to the State Board of Education. Preparation for a specific vocation must be considered as part of the total educational program both in the local schools and at the state level, the Board feels. Guidance functions at the state level should be integrated, as should research and development, the collection of statistical data, and the use of Title V ESEA funds. Likewise the matter of the junior college, with its relationship to both general and vocational education, shows the need for integrating vocational education into the total educational program of the State Board of Education, the Board stated.

In answer to the question about the advisability of establishing state vocational centers, the State Board of Education stated its preference for the development of vocational curricula in the comprehensive junior college and in some cases in the four-year colleges. The Board also mentioned the possibility of granting funds to boards of cooperative services for vocational purposes. In any case, local communities should be given every opportunity to initiate plans of their own rather than the state establishing schools, the Board feels.

Letter From Commission on Higher Education

The committee asked the Commission on Higher Education to comment in writing on the junior college question and the possibility of establishing state vocational schools. The Commission presented only preliminary answers to these questions for the August meeting, with the understanding that their final report would not be forthcoming until late fall.

The Commission stated that the nature of the junior college appears to place it more within the post-secondary system of education than the secondary system. The question of administrative structure for junior colleges is being considered now by the Commission.

On the question of state vocational schools, the Commission prefers the development of regional community and four-year colleges which could include vocational-technical programs in the curriculum. Separate vocational institutions would not appear to be desirable, the Commission said.

Dr. Byron Hansford, State Commissioner of Education

Dr. Hansford appeared personally before the committee in support of his letter advocating the transfer of vocational education to the State Board of Education. He stated that experience over the past 50 years with separate administration of general and vocational education has not been successful. He noted that junior colleges began as vocational schools but became comprehensive when it was found that technical and vocational education required a complement of academic courses. Experience has shown that vocational and general education should not be separated, he contended.

Speaking against granting tax-levying authority to boards of cooperative services for area vocational schools or other purposes, Dr. Hansford suggested that without levying taxes the boards of cooperative services could use rented facilities or use a lease-purchase plan.

Dr. Hansford stated his position in opposition to the establishment of state vocational schools. He feels that local control should be maintained and vocational education should be offered in comprehensive institutions.

Decisions on the use of state aid should rest with the local school board rather than the General Assembly, Dr. Hansford said. He opposes granting earmarked funds for vocational education. Likewise he feels that state-financed guidance programs should not separate vocational guidance from over-all guidance and counseling. He opposes the authorization of vocational guidance field men under the State Board for Vocational Education.

Dr. Hansford stated that if vocational education were transferred to the State Board of Education the following improvements would be possible: (1) a joint staff could operate with a fruitful interchange of ideas; (2) the public schools would not have to communicate with two different governing agencies; (3) an unnecessary duplication of effort could be avoided; (4) counseling could be better integrated; (5) education beyond high school could be better coordinated with vocational education; and (6) boards of cooperative services could be established to include all types of services and the establishment of such boards solely for vocational education purposes could be avoided.

Dr. Hansford agreed to see what could be done to improve relationships with the State Board for Vocational Education through joint board meetings, joint staff meetings, and other staff and board liaison. He stated that there are legal obstructions to granting Title V ESEA funds to a separate State Board for Vocational Education, however.

Problems and Issues in Vocational Education

In its two years of deliberations the committee has found several problems and issues that face the General Assembly in the field of vocational education. The major questions involve: (1) improvement of vocational programs in the high school; (2) institutional patterns and relationships for vocational and technical programs at the post secondary level; and (3) state administrative organization for vocational education. The discussion below summarizes the principal points in each of these categories.

Secondary Level

At the secondary level, the state must evaluate the possible courses of action within the framework of local control of education. The state's interest in improved vocational programs must be balanced against the importance of retaining the local school board's control over the educational program of a school district. The General Assembly must keep this in mind as it considers the specific questions which follow.

(1) What can the state do to increase the availability of vocational education in the high school, assuming that this is a desirable goal?

One way is to attempt to convince more school administrators and local boards of education that vocational programs are a valuable part of the high school curriculum and are worth the additional expenditure involved. Promoting vocational education in this way can perhaps be accomplished in part through the use of state funds for development of promotional and curricular materials, but the task must also be shared by many others, including other governmental agencies, teacher education institutions, labor and industry, and individual citizens.

Persuasion alone may not be sufficiently effective to meet the immediate vocational education needs at the secondary level. Something more may be needed to encourage local schools to improve their vocational offerings. This may mean greater state participation in the cost of local programs. Although the federal government has relied heavily on categorical aid to provide incentive for the development of local vocational programs, the state has traditionally refrained from earmarking large sums for vocational purposes and has instead granted general aid without specifying the purposes for which it must be used. The General Assembly must decide whether the need for more secondary level vocational programs is great enough to justify additional state aid earmarked for that purpose. If it is decided that earmarked aid is justified, a further question is whether it should be granted to all ongoing programs and new programs on an equal basis or whether new programs should be given special encouragement through a higher proportion of state aid.

(2) What can the state do to promote flexible, up-to-date vocational programs which meet the needs of students and employers?

Basically, the responsibility for keeping vocational programs up to date lies with the State Board for Vocational Education and with local school administrators. There is little that the General Assembly can do directly, since this is properly an administrative, not a legislative, matter.

It would be possible for the General Assembly to specify a greater proportion of state aid for those programs it feels should be encouraged (trades and industries, for example) and a smaller proportion for those it feels should receive less emphasis (general homemaking not related to gainful employment, for example). But since the General Assembly is not equipped to keep abreast of current trends, such a policy runs a much greater risk of obsolescence than delegating these decisions to the appropriate administrative agency where there is machinery specifically designed to keep programs flexible and current.

(3) What can the state do to help students who have academic, socio-economic, or other handicaps that prevent them from succeeding in the regular vocational education program?

Not all non-college-bound students seem to fit into regular vocational classes as these classes are now constituted in most high schools. The student who does not fit the mold may never enter a vocational course; and if he enters, he may not stay because he is too much of a problem to his teachers, who frequently do not know how to help him succeed. Either way he is missing out on valuable training that would have helped prepare him for a job.

Yet a large proportion of the students in this category will be entering the labor market when they leave high school, either as dropouts or as graduates. Something more needs to be done to help them approach employability before they leave school to enter the labor market.

The most logical solution seems to lie in expanding the capacity of the regular vocational programs to reduce the need for selectivity in admissions so that potential dropouts and other students with academic or socio-economic handicaps are not left out or pushed out. If this approach is accepted, it means not only providing financial resources for program expansion, but also providing a teacher education program aimed at developing in vocational teachers the attitudes and abilities needed to deal successfully with these students and their individual problems within the regular programs. The point is that, where possible, regular programs (whether greatly expanded or not) should be better adapted to meet the needs of problem students as well as average students.

Even with improved programs as described above, there may in some cases be a need for separate programs for students with special needs. Federal funds from the Vocational Education Act of 1963 and from Title I of the Elementary and Secondary Education Act of 1965 can be used for this purpose. It may be that with encouragement from the State Board for Vocational Education and the State Board of Education, local school districts will add local funds to federal funds to develop these kinds of special programs where they are needed most. In addition, state aid for this purpose might be considered.

(4) What can the state do to improve counseling in the public schools and make it more vocationally oriented?

It has been suggested that one of the best ways to improve the vocational side of counseling and guidance in the public schools would be for the State Board for Vocational Education to employ several field men to work with local guidance counselors, keeping them informed on trends in employment and training and encouraging them to strengthen the vocational aspects of their guidance programs. This would involve state funding of several new staff people.

Another possibility would be to provide state aid for all local guidance and counseling personnel. This has been considered at various times in recent years but the General Assembly has never granted additional state aid specifically for this purpose. Still another possibility for improvement involves the training of guidance and counseling personnel. The courses of study for those preparing to be counselors could be made more vocationally oriented so that counselors will be able to provide adequate occupational counseling for all students. This is a matter to be considered by the teacher training institutions.

(5) What can the state do to improve the image of vocational education generally and encourage students to enter vocational education courses?

Vocational education still tends to carry a stigma among many students, parents, and teachers. Attempts to improve the image have shown some success but more needs to be done. Improved vocational counseling and improved teacher information and attitudes toward vocational education from the elementary grades up will probably help more than anything else.

Another approach would be to encourage more schools to have exploratory pre-vocational courses for students in the eighth or ninth grade. Federal reimbursement is not available for such courses, but the state could provide reimbursement if the General Assembly and the State Board for Vocational Education chose to do so.

Post-Secondary Level

At the post-secondary level of education Colorado has a mixture of state and local control. The junior colleges and boards of cooperative services provide post-secondary education under local sponsorship, while all of the four-year colleges and universities are state-operated institutions. The General Assembly will soon be confronted with the question of state or local control for junior colleges and along with this comes the question of state or local control for other post-secondary programs in the vocational and technical areas -- that is, if additional non-degree programs are deemed advisable apart from the junior college.

(1) What can the state do in terms of institutional structure to ensure the availability of post-secondary vocational and technical education?

The principal post-secondary structural question before the General Assembly at the present time is how best to encourage and promote the establishment and growth of community junior colleges. If the General Assembly accepts the proposed system of state junior colleges and the system is expanded so as to be accessible and available to all, including those who live in the Denver metropolitan area, then the remaining question is whether the junior college system can be relied on to provide all of the necessary post-secondary vocational and technical training or whether additional programs will be needed apart from the junior colleges; and further, if additional programs are needed, whether they should be provided by the state or developed and operated locally.

In view of the oft-stated vocational-technical training goals of all community junior colleges, it can be expected that junior college proponents will oppose the development of single purpose post-secondary vocational training institutions. The junior colleges are convinced that they, along with some of the four-year colleges and universities, will be able to provide all the post-secondary vocational-technical training that is needed. It is for the General Assembly to weigh these claims and the value of the comprehensive institution against the desirability of vocational schools where vocational-technical training would be the primary purpose of the institution.

(2) What should the state do about the development of local area vocational schools under the supervision of boards of cooperative services?

If the General Assembly concludes that some single purpose vocational schools are necessary in addition to the junior colleges, it must then consider whether the present development of local area schools under boards of cooperative services is desirable. Boards of cooperative services as authorized by statute are loosely knit groups of two or more school districts organized for the purpose of providing some school district services and programs jointly. They were originally conceived as multi-purpose units but the State Board for Vocational Education is promoting the establishment of such boards for the primary purpose of building and operating area vocational schools.

The boards do not now have the authority to levy taxes; at the present time they must obtain local funds through the machinery of the individual school districts. If the concept of the local area vocational school is good, and if boards of cooperative services are considered to be desirable units for governing such schools, then the General Assembly will have to consider granting state support for construction and operation of area schools and authorizing tax-levying and other powers for boards of cooperative services as independent educational entities.

On the other hand, if the concept of the local area vocational school is not acceptable, then the General Assembly will have to consider ways of restricting boards of cooperative services so that they will not be developing new vocational schools which will later require state support against the will of the legislature. If local area schools are not desirable, federal construction funds should be channeled in other directions and it is up to the General Assembly to inform the State Board for Vocational Education of its wishes and plans for the use of these funds.

It is imperative that a decision be made on the whole question of local area vocational schools and boards of cooperative services, for if the General Assembly does not make its own policy decision, the decision will have been made by default.

(3) Should the state give consideration to the establishment of vocational schools financed and operated by the state?

A further possibility is the establishment of vocational-technical schools financed and operated by the state. The General Assembly may find that the state needs a small number of vocational schools placed in carefully selected strategic locations and open to students from all over the state, rather than a large number of local area schools serving individual communities. If state vocational schools are established, the programs could be set up so that they would supplement and not duplicate the junior college programs.

Here again, the General Assembly must decide whether state vocational schools are needed in order to ensure the availability of post-secondary vocational education in the Denver metropolitan area and in other parts of the state.

(4) What can the state do to encourage junior colleges (and four-year colleges and universities where appropriate) to provide more vocational-technical education?

Under the present junior college structure of local control (with state aid grants of $500 per F.T.E.), vocational-technical programs are too often neglected. If this structure is continued, it may be that the General Assembly should offer additional incentive for vocational-technical programs. One way to do this would be to grant more than $500 per student for students enrolled in these programs. The availability of additional funds to cover the higher cost of vocational programs might encourage the institutions to expand their vocational offerings.

If the General Assembly votes to revise the structure by setting up a system of state junior colleges, the decisions on curriculum will be subject to direction from the state level. Under this system, it would be up to the state level administrative agency to plan and budget for adequate vocational-technical programs and legislative direction would have to come in large part through the budget process.

(5) What can the state do to encourage junior colleges to make their vocational education facilities available to high school students, dropouts, and others not officially admitted to the regular junior college program?

If the General Assembly decides to rely on the junior colleges for all vocational-technical education (except that which the high schools are now providing), then the junior college facilities should be made available for programs serving persons not enrolled in the regular junior college program. This includes dropouts, graduates interested in short courses and evening courses, and students attending high schools which are not equipped to teach the specific courses desired.

Making facilities available for such purposes is largely an administrative matter. It would be more difficult to implement under the present system of locally controlled junior colleges than under a system of state supervision, but the possibility exists under either structure. In fact, it is among the avowed purposes of the junior college.

Administration at the State Level

The question of administrative structure for vocational education has been before the General Assembly for many years but a final decision has not yet been reached. Uncertainty over legislative policy has added to the problems of vocational education. The General Assembly should made a decision which is definite enough to end this uncertainty.

(1) What should the General Assembly do about the proposal of the State Board of Education for placing the vocational education function under its jurisdiction?

The State Board for Vocational Education operates as an independent board and wishes to remain separate and autonomous. The State Board of Education on the other hand, feels that it should be given full control over vocational education, with the vocational board serving only in an advisory capacity. Because of this difference of opinion over the appropriate administrative structure, the two boards have not been on very friendly terms in recent years.

If the General Assembly feels that the vocational education function belongs with the agency responsible for over-all educational policy, then legislative action should be taken to place it under the State Board of Education. If it is felt that the supervision of vocational education belongs with a separate agency covering secondary, post-secondary, and adult programs in various types of institutions, then a definite decision to retain the State Board for Vocational Education is in order. Along with the latter decision must come concrete proposals for improving working ralationships between the two boards and their staffs.

The General Assembly may wish to consider other alternatives, such as replacing the State Board for Vocational Education with a new agency, or combining the vocational education function with higher education rather than with public elementary and secondary education.

(2) What should be the state's policy on earmarking funds for vocational education?

At the present time the state's policy is basically against earmarking funds for vocational purposes. A very small proportion of state aid for secondary schools and junior colleges is specifically earmarked for vocational education. This policy of general aid has been promoted by the State Board of Education. The State Board for Vocational Education supports the concept of earmarking funds for vocational education because it is felt that without it the vocational programs have been slighted. This difference of opinion is one of the reasons why the State Board of Education feels the vocational board should be abolished.

As long as a separate board exists there will be requests for additional funds earmarked for vocational education. If there is a single board for all public school education, including vocational programs, vocational education probably will be considered as only one of many aspects of the over-all educational program to be financed through general aid. Vocational education probably will be made a more integral part of the total program, rather than being set apart as it is now with separate state financing.

It is clear that the General Assembly's decision on earmarking for vocational education is closely related to its decision on whether there should be a separate vocational board.

(3) What can the state do to improve coordination of the many programs offering vocational training?

Vocational education is much broader than the public school programs and no matter what the General Assembly decides to do about retaining the State Board for Vocational Education, there is still a need for improved coordination of all the vocational training programs operating in this state, including those outside the public schools.

Efforts toward coordination at the present time are on a voluntary basis. If the General Assembly feels that there is need for a more formalized system involving a coordinating agency, it must be decided whether it can be handled better through the existing vocational board, through the State Board of Education if the vocational board is abolished, or through a new agency established for the specific purpose of providing coordination.

(4) What can the state do to ensure the availability of current and projected employment information?

Accurate and reliable employment projections are not available for the state of Colorado. Although the State Department of Employment is attempting to establish a system for providing this information, it is unlikely that complete and up-to-date data will be available on a continuous basis very soon. Consequently it is important that the advisory committee system be fully utilized at both the state and local levels.

For the long range, however, the General Assembly may wish to encourage the Department of Employment in its efforts to develop meaningful employment information by making certain that the necessary funds are allocated for that purpose.